Final Draft

Water Resource Protection Strategies for the Implementation of CERP Under Federal and State Law

April 25, 2003

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i. Preamble

This paper represents the final draft of the white paper prepared by the South Florida Water Management District, originally dated June 25, 2002 and revised December 16, 2002. The paper has been substantially revised based on public and agency input pertaining to key policy, technical and process issues associated with the implementation of the Comprehensive Everglades Restoration Plan (CERP). This final draft is also the result of continuing debate and discussion among Federal and State partners including the Department of the Interior (i.e., U. S. Fish and Wildlife Service and Everglades National Park), the U.S. Army Corps of Engineers, Florida Fish and Wildlife Conservation Commission, the Florida Department of Environmental Protection and the South Florida Water Management District.

Major modifications to this draft include organizational changes and a proposal to use separate tools for determining the Federal WRDA 2000 requirements of "existing legal source" protection versus the State of Florida Section 373.1501 F.S. requirements of "existing legal user" protection. Additionally, this revision proposes to use an independent analysis for the determination of regional water availability and initial reservations versus tying these analyses to the existing legal source determination.

The focus of this paper is to provide a proposed methodology for identifying and protecting existing legal sources and users, flood protection, and identifying and reserving water for natural systems under State and Federal law. Continuing outstanding issues will need to be resolved by affected stakeholders in order to realize the successful implementation of the CERP program. Building a consensus through a public process is important to this success and can be expected to continue to result in modifications to the proposed methodologies or assumptions contained herein. The ultimate goal should be that all interests are treated equitably, that the natural resources are restored and protected, and that existing and future water supply needs are provided for – all consistent with the assumptions and expectations of the CERP program and relevant State and Federal laws.

Five appendices are also attached which provide more detailed information, including: 1) preliminary definition of terms; 2) CERP assurance language from Section 601(h) of the Water Resources Development Act of 2000; 3) President-Governor Agreement, January 9, 2002; 4) proposed Pre-CERP Baseline assumptions; and 5) agency and public comments on the June 25, 2002 draft.

It should be noted that this paper is anticipated to be a policy and technical guidance document prepared by the South Florida Water Management District and has not obtained formal approval or acceptance from other Federal and State agencies. The concepts presented in this paper are expected to be further defined by the U.S. Army Corps of Engineers and South Florida Water Management District CERP Guidance Memorandum.

Table of Contents

i. Preamble 3

I. Purpose 7

II. Summary of Relevant Legal Directives 7
A. Federal Water Resources Development Act of 2000 7
B. State Laws Regarding Implementation of CERP 9
C. Water Resource Protection Tools Under State Law 10
1. Reservations 10
2. Consumptive Use Permitting 11
3. Minimum Flows and Levels 11
4. Water Shortage Plan 12
5. Regional Water Supply Planning Requirements 12

III. Conceptual Relationship between Water Supply and Demands for Humans and Natural Systems, Resource Protection Tools and CERP 13

IV. Overview of Proposed Water Resource Protection Strategies for CERP Implementation Under Federal and State Law 16
A. Background 16
B. Pre-CERP Baseline-Identification and Quantification of Existing Legal Sources and Levels of Service for Flood Protection Existing as of December 2000 16
C. Existing Condition PIR Baseline - Identification and Quantification of Existing Legal Users and Identification and Quantification of Flood Protection Levels of Service through Time 17
D. PIR Tentatively Selected Plan - Protection of Existing Legal Sources and Levels of Service for Flood Protection Existing as of December 2000 and Protection of Existing Legal Users and Levels of Service for Flood Protection through Time 17
E. Draft PIR - Quantification of Additional Water Made Available for the Natural System and Quantification of Additional Water Made Available For Other Uses 18
F. Establishing Water Reservations - Protection of Additional Water Made Available for the Natural System 19

V. Identification and Quantification of Existing Legal Sources of Water and Existing Levels of Service for Flood Protection Existing as of December 2000 through the Development of a Pre-CERP Baseline 20
A. Background 20
B. Guiding Principles for Defining the December 2000 Pre-CERP Baseline 21
C. Identification of Existing Legal Sources as of December 2000 22
D. Quantification Existing Legal Sources Through Development of the December 2000 Pre-CERP Baseline 25

E. Identification and Quantification of Levels of Service for Flood Protection Existing as of December 2000 27

VI. Identification and Quantification of Existing Legal Users, Flood Protection Levels of Service and Natural System Performance through Time by Development of the Existing Condition PIR Baseline 29

A. Background 29

B. Developing the Existing Condition PIR Baseline 29

C. Identification and Quantification of Existing Legal Users 29

D. Identification and Quantification of Levels of Service for Flood Protection 30

E. Identification and Quantification of Existing Natural System Performance 31

VII. Protection of Existing Legal Sources and Levels of Flood Protection Existing as of December 2000; and Protection of Existing Legal Users and Levels of Service of Flood Protection through Time During Development of the PIR Tentatively Selected Plan 33

A. Background 33

B. Protection of Existing Legal Sources from Elimination or Transfer as of December 2000 During Development of the PIR Tentatively Selected Plan 33

C. Protection of Levels of Service for Flood Protection Existing as of December 2000 During Development of the PIR Tentatively Selected Plan 34

D. Protection of Existing Legal Users During Development of the PIR Tentatively Selected Plan 35

E. Protection of Levels of Service for Flood Protection through Time During Development of the PIR Tentatively Selected Plan 36

VIII. Quantification of Additional Water Made Available for the Natural System and Other Uses through the Development of the Draft PIR 39

A. Background 39

B. Proposed Performance Measures 40

IX. Protection of Additional Water Made Available by CERP for the Natural System Through State Water Reservations and Other Uses through State Law 40

A. Background 40

B. Development of State Water Reservation 40

C. Relationship of Quantification of Water to be Reserved and Operating 41 Manuals 41

X. Additional Water Supply and Resource Protection Strategies Proposed by The State to Complement CERP Implementation 43

A. Background 43

B. Quantification of Regional Water Availability for Water Supply Service Areas 44

C. Implementation of Regional Water Availability through Consumptive Permitting Rules 45
D. Establishing an Initial Reservation of Water for the Natural System....46
E. Minimum Flows and Levels Rule 47
F. CUP Permit Duration Rule....47

Appendix

Appendix A. Definitions....49

Appendix B. Water Resources Development Act 2000, Section 601(h) 53

Appendix C. President-Governor Agreement, January 9, 2002 58

Appendix D. Proposed Guiding Principles and Associated Issues
CERP Existing (2000) Condition - Pre-CERP Baseline Issues and Matrix 61

Appendix E. Agency and Public Comments on June 25, 2002 Draft 68

I. Purpose

This paper represents the final draft of the white paper prepared by the South Florida Water Management District, originally dated June 25, 2002 and revised December 16, 2002. The paper has been substantially revised based on public and agency input pertaining to key policy, technical and process issues associated with the implementation of the Comprehensive Everglades Restoration Plan (CERP).

The purpose of this paper is to outline a process and methodology under State and Federal law for identifying and protecting water for the natural system and human uses which will be made available through implementation of the CERP. This paper also identifies technical and policy issues regarding assurances for existing legal sources, protection of existing legal users, protection of levels of service for flood protection, and reservations of water for the natural system. The paper includes a discussion of additional State strategies associated with water supply plan recommendations pertaining to regional water availability for consumptive uses, initial reservations for the natural system and other rules which provide interim assurances for water users and water resource protection.

The general policy framework and concepts discussed in this document will be presented to the South Florida Water Management District Governing Board, the Water Resources Advisory Commission, and the South Florida Ecosystem Restoration Task Force's Working Group in May 2003. After final comments and approval by the U.S. Army Corps of Engineers, this document may be used to assist in the preparation of the CERP Guidance Memorandum detailing the process and methodology for identifying and protecting water for the natural system and other uses under Federal and State law.

A glossary of key terms and preliminary definitions has been included in Appendix A.

II. Summary of Relevant Legal Directives

A. Federal Water Resources Development Act of 2000

Congress enacted the Water Resources Development Act of 2000, Title VI, Comprehensive Everglades Restoration (WRDA 2000) to approve implementation of the CERP "as a framework for modifications and operational changes to the Central and Southern Florida (C&SF) Project that are needed to restore, preserve, and protect the South Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection." (Sec. 601(b)(1)(A)). WRDA 2000 requires CERP "to be implemented to ensure the protection of water quality in, the reduction of the loss of fresh water from, the improvement of the environment of the South Florida Ecosystem and to achieve and maintain the benefits to the natural system and human environment described in the CERP" (Sec. 601(h)(1)). These provisions are primarily contained in Section 601(h) entitled "Assurance of Project Benefits", attached as Appendix B. Some of the most pertinent portions regarding quantification and protection of water supplies from CERP are summarized below to provide background for this paper.

Section 601(h)(2) requires the execution of a binding agreement between the President and the Governor of Florida to ensure that, "the water made available by each project in the Plan shall not be permitted for consumptive use or otherwise made unavailable by the State until such time as sufficient reservations of water for the restoration of the natural system are made under State law in accordance with the project implementation report for that project and consistent with the Plan." The "Comprehensive Everglades Restoration Plan Assurance of Project Benefits Agreement" was executed on January 9, 2002. A copy of this agreement is included as Appendix C.

Section 601(h)(3) requires the development of programmatic regulations to establish a process for implementation of the CERP, including in relevant part, procedures for development of Project Implementation Reports (PIR), Project Cooperation Agreement (PCA), operating manuals, procedures to incorporate new information and adaptive management into CERP implementation, and procedures "to ensure the protection of the natural system consistent with the goals and purposes of the Plan. . . ." Section 601(h)(3)(C)(i)(I)-(III). At the time this paper is being finalized, the programmatic regulations remain in draft form.

Section 601(h)(4) of the WRDA 2000 identifies requirements for project specific assurances in PIRs, PCAs, and operating manuals. PIRs, in relevant part, must include identification of quantity, timing, and distribution of water for the natural system and identification of water to be reserved under State Law. Sec. 601(h)(4)(A) Project Cooperation Agreements cannot be executed "until any reservation or allocation of water for the natural system identified in the Project Implementation Report is executed under State law." Sec. 601(h)(4)(B). Operating manuals must be consistent "with the water reservation or allocation for the natural system described in the project implementation report and the project cooperation agreement for the project or group of projects." Sec. 601(h)(4)(C)

Section 601(h)(5) provides a savings clause that applies when implementing CERP. This is a key focus of the Federal legislation. It states:

> (A) NO ELIMINATION OR TRANSFER—Until a new source of water supply of comparable quantity and quality as that available on the date of enactment of this Act is available to replace the water to be lost as a result of implementation of the Plan, the Secretary and the non-Federal sponsor shall not eliminate or transfer the existing legal source of water including those for—
>
> (i) an agricultural or urban water supply;
> (ii) allocation or entitlement to the Seminole Indian Tribe of Florida under section 7 of the Seminole Indian Land Claims Settlement Act of 1987 (25 U.S.C. 1772e);
> (iii) the Miccosukee Tribe of Indians of Florida;
> (iv) water supply for Everglades National Park; or
> (v) water supply for fish and wildlife.

(B) MAINTENANCE OF FLOOD PROTECTION - Implementation of the Plan shall not reduce levels of service for flood protection that are-

(i) in existence on the date of enactment of this Act; and
(ii) in accordance with Applicable law.

(C) NO EFFECT ON TRIBAL COMPACT - Nothing in this section amends, alters, prevents, or otherwise abrogates rights of the Seminole Indian Tribe of Florida under the compact among the Seminole Tribe of Florida, the State, and the South Florida Water Management District, defining the scope and use of water rights of the Seminole Tribe of Florida, as codified by section 7 of the Seminole Indian Land Claims Settlement Act of 1987 (25 U.S.C. 1772e).
Section 601(h)(5), WRDA 2000

B. State Laws Regarding Implementation of CERP

The Florida Legislature has also enacted a series of laws into Chapter 373 defining the roles of the SFWMD and the Florida Department of Environmental Protection (DEP) in the implementation of CERP, including Sections 373.026(8), 373.1501, 373.1502, and 373.470, F.S. With regard to assuring project benefits, as with WRDA 2000, Section 373.470(b) requires that the comprehensive plan be used as a "guide and framework to ensure that the project components will be implemented to achieve the purposes of the "Federal Water Resources Development Act of 1996." S. 373.470(3)(b)2, F.S.

Prior to any project component being submitted to Congress for authorization or receipt of an appropriation of State funds for construction, the DEP must approve each project component, pursuant to Section 373.026(8), F.S., upon a finding that the SFWMD has complied with the requirements set forth in Section 373.1501(5), F.S. That section provides assurances to natural systems and existing legal users and for flood protection, including requirements that SFWMD for each project component:

(a) Analyze and evaluate all needs to be met in a comprehensive manner and consider all applicable water resource issues, including water supply, water quality, flood protection, threatened and endangered species, and other natural system and habitat needs.

(d) Consistent with [Chapter 373], the purposes for the Restudy provided in the Water Resources Development Act of 1996, and other applicable Federal law, provide reasonable assurances that the quantity of water available to existing legal users shall not be diminished by implementation of project components so as to adversely impact existing legal users, that existing levels of service for flood protection will not be diminished outside the geographic area of the project component, and that water management practices will continue to adapt to meet the needs of the restored natural environment.
Section 373.1501(5), F.S.

Prior to executing a PCA, the SFWMD must develop a Project Implementation Report (PIR) with the U.S. Army Corps of Engineers to address the requirements in Section 373.1501, F.S., and to obtain approval under Section 373.026, F.S., for the project from the DEP. This helps to assure that the PIR will be sufficient to meet both State, as well as Federal, law requirements for implementing a CERP project.

In addition, Section 373.470(3)(c), F.S., requires that each PIR identify the increase in water supplies resulting from a project component. These increased water supplies for the natural system must be allocated or reserved by the SFWMD under Chapter 373, F.S. Section 373.470(3)(c), F.S.

C. Water Resource Protection Tools Under State Law

As described in Section B above, WRDA 2000 and Chapter 373, F.S. require that State law be used to protect water supplies for natural systems and humans made available by CERP. The following is a summary of State statutory tools available to protect water supplies for these purposes.

1. Reservations

As required by State and Federal law, reservations of water for the natural system will be established by the SFWMD pursuant to State law. The State law on water reservations, in Section 373.223(4), F.S., provides:

> The governing board or the department, by regulation, may reserve from use by permit applicants, water in such locations and quantities, and for such seasons of the year, as in its judgment may be required for the protection of fish and wildlife or the public health and safety. Such reservations shall be subject to periodic review and revision in the light of changed conditions. However, all presently existing legal uses of water shall be protected so long as such use is not contrary to the public interest.

In simple terms, when water is reserved under this statute it is not available to be allocated for use under a consumptive use permit. The SFWMD anticipates that both CERP and non-CERP related reservations will be adopted for Everglades restoration. For CERP reservations, the amount of water to be reserved is the water made available for the natural system by a CERP project, or for the protection of "fish and wildlife" under the reservation statute.

Existing allocations under a consumptive use permit are protected to the extent they are "not contrary to the public interest." Under Florida law, permitted uses and domestic water uses (which are exempt from requirements to obtain a permit) have the legal status of an "existing legal use." Unauthorized existing uses do not constitute an "existing legal use". Also, for CERP reservations, the public interest balance for existing legal uses in the reservation statute must be read in conjunction with Section 373.1501, F.S., which requires a finding by the SFWMD that a CERP project will not diminish the water available so as to adversely impact the existing legal uses under permit. Section 373.1501(5)(d), F.S.

Pursuant to WRDA 2000, CERP reservations for a specific project must be executed prior to entering into the PCA for the project. However, reservations are subject to periodic review based on changed conditions, such as the changes that will occur in the C&SF Project as CERP projects become operational. This provides flexibility to account for changes in implementation strategies, restoration objectives, and contingency plans during the life of the project.

2. Consumptive Use Permitting

Consumptive use permits are issued by the water management districts pursuant to Part II of Chapter 373, F.S. As stated above, under Florida law permitted uses and domestic water uses (which are exempt from requirements to obtain a permit) have the legal status of an "existing legal use." This existing legal use protection has a role in establishing water reservations.

In order to obtain a consumptive use permit, the permit applicant must provide reasonable assurances that the use is "reasonable-beneficial", will not interfere with any presently existing legal use of water, and is consistent with the public interest, pursuant to Section 373.223, F.S. The SFWMD implements this three-prong test pursuant to rules adopted in Chapter 40E-2, Florida Administrative Code (F.A.C.). Permits are conditioned to assure that uses are consistent with the overall objectives of Chapter 373, F.S. and are not harmful to the water resources of the area, under Section 373.219, F.S.

Under Florida law, a consumptive use permit provides the permittee with the right to use water consistent with the conditions of the permit for the duration of the permit. Prior to permit expiration, the permittee must obtain a renewal of the permit in order to continue the water use. State law also provides specific standards to apply when competition for water occurs, such as when not enough water available to meet the demands of all pending requests for water use permit under Section 373.233, F.S.

Existing legal uses of water must meet the conditions for issuance of a permit during a 1 in 10 year drought condition, known as the "level of certainty." This "level of certainty" provides assurance, both to the permitted user and the water resources, that harm will not occur due to permitted withdrawals in climatic conditions less severe than a 1 in 10 year drought. This concept and its implications during increasing drought conditions are further discussed in Section 3 below.

3. Minimum Flows and Levels

The SFWMD is responsible for the implementation of statutory provisions in Section 373.042, F.S., requiring establishment of Minimum Flows and Levels (MFLs) for watercourses and aquifers. Generally stated, the MFLs for a given watercourse or aquifer are the limit at which further withdrawals would be significantly harmful to the water resources of the area (Section 373.042, F.S.). Significant harm is defined by SFWMD rule to be the temporary loss of water resource functions that takes more then two years to recover (Rule 40E-8.021(24), F.A.C.). Certain exclusions and considerations for establishing MFLs, including defining "significant harm" for a specific water body, are contained in Section 373.0421, F.S. Recovery and

prevention strategies must also be developed if there are existing or projected shortfalls in meeting the MFL, as provided by Section 373.0421, F.S.

Minimum flow and level standards for specific water bodies and aquifers within the SFWMD are contained in Chapter 40E-8, F.A.C., which also includes recovery and prevention strategies for each MFL. At this time MFLs have been established for the following priority water bodies:

- Lake Okeechobee
- Everglades (Water Conservation Areas, Everglades National Park, Rotenberger, and Holeyland Wildlife Management Areas)
- Northern Biscayne Aquifer within the Lower East Coast
- Lower West Coast confined aquifers
- Caloosahatchee Estuary
- Northwest Fork of the Loxahatchee River
- St. Lucie River

The SFWMD is also proceeding with efforts to develop MFLs for Biscayne Bay and the Southern Biscayne aquifer by the end of 2004 and the Florida Bay by the end of 2006.

In addition to the standards and recovery and prevention strategies in Chapter 40E-8, specific consumptive use permitting criteria for MFLs are adopted in Chapter 40E-2, F.A.C. and water shortage criteria for MFLs are adopted in Chapters 40E-21 and 40E-22, F.A.C.

4. Water Shortage Plan

Pursuant to Section 373.246, F.S., water shortage declarations are designed to prevent serious harm from occurring to water resources. Serious harm is defined by SFWMD rule as long-term, irreversible, or permanent impacts to the water resource (Rule 40E-8.021(23), F.A.C.). Declarations of water shortages by the Governing Board are used as a tool to assist in preventing serious harm to the water resources during droughts, while equitably distributing water resources for consumptive and non-consumptive uses, as provided in Chapter 40E-21, F.A.C. Water shortage declarations are imposed in phases, with increasing water use cutbacks with increasing drought conditions.

5. Regional Water Supply Planning Requirements

Regional water supply plans, which are approved by the SFWMD Governing Board, provide strategies that assure that adequate water is available to meet future urban, agricultural, and natural system demands for 20-year horizon (Section 373.0361, F.S.). Regional water supply plans include water supply and water resource development components, a funding strategy for water resource development projects, MFLs established within the planning region, MFL recovery and prevention strategies, and technical data and information supporting the plan.

The water supply development component must include the quantification of the water supply needs for all existing and projected future uses within the planning horizon, with a level of certainty planning goal for meeting those needs during a one in ten year drought event.

Furthermore, it must include a list of water source options for water supply development, including traditional and alternative sources, from which local governments, government-owned and privately owned utilities, self-suppliers, and others may choose. For each option, the amount of water available, the estimated unit cost of the option, and sources of funding must be identified.

The *Lower East Coast Regional Water Supply Plan (LECRWSP)*, approved by the Governing Board in May 2000, incorporates the CERP components planned within the South Florida ecosystem as identified in WRDA 2000. The future updates of the CERP and Lower East Coast Regional Water Supply Plan, in five year intervals, will continue to be coordinated.

III. Conceptual Relationship between Water Supply and Demands for Humans and Natural Systems, Resource Protection Tools and CERP

Prior to human intervention, the water needs of the environment were a function of the natural drainage patterns and hydrologic conditions. Hydropatterns were a function of pre-drainage features and rainfall distributions typically exhibiting higher wet season flows and levels that decreased naturally as rainfall decreased during dry conditions. Human intervention changed natural drainage patterns through a reduction in the spatial extent of the natural areas, the construction of levees, canals, and structures, and the introduction of human demands. These changes included a reduction in groundwater levels near the coast for purposes of flood protection that have resulted in changes to the spatial and temporal distribution of flows and levels to the environment, and altered the timing and volume of water which was available under pre-drainage conditions.

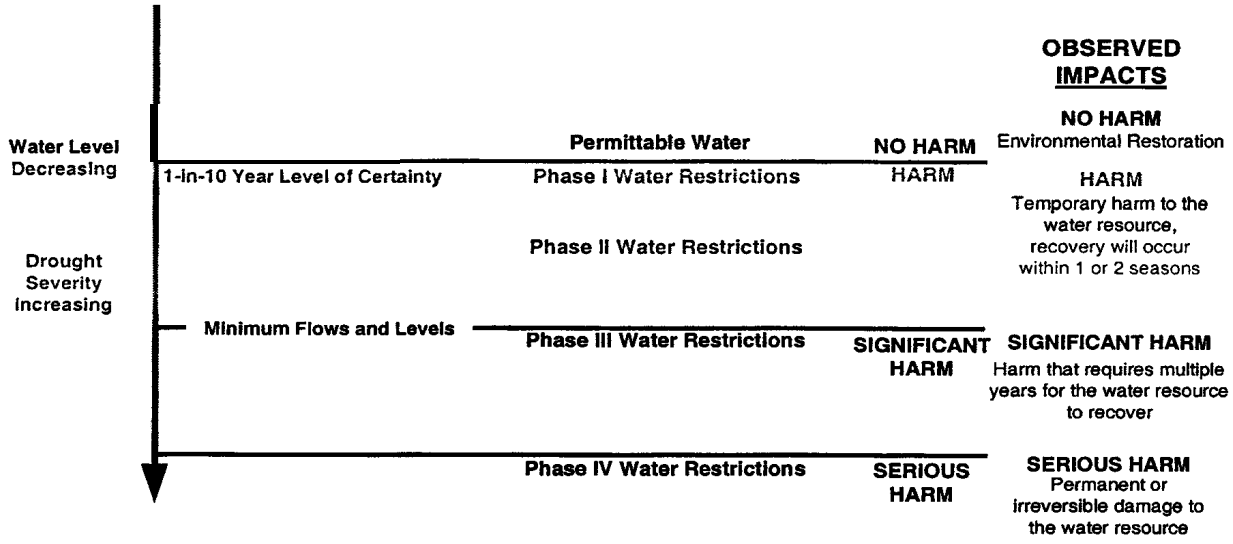
Human demands increase as a function of rainfall deficits as illustrated in Figure 1 (located at the end of this section). One of the goals for water supply planning is to achieve a level of certainty to meet human demands up to and including a one in ten year drought condition. Under these conditions, the user must demonstrate that a proposed use is reasonable-beneficial, is consistent with the public interest, and will not interfere with other presently existing legal uses. Consumptive use permitting criteria are intended to protect the water resources from harm and also to provide a level of certainty to assure permit holders that they will not experience cutbacks to their reasonable-beneficial use in a less severe drought event.

More severe drought conditions than the permitted level of certainty may cause further reductions in groundwater levels and surface storage which are vital for agricultural and landscape irrigation, potable use, the prevention of saltwater intrusion, and the natural system. Human demands continue to increase when rainfall deficits exceed a one in ten year drought event. Water shortage restrictions (Chapter 40E-21, F.A.C.) are imposed on consumptive uses to moderate these increased demands in order to prevent “serious harm” to the water resources.

Minimum flows and levels are established to identify the point at which “significant harm” to the water resources or ecology is caused by further withdrawals (Section 373.042 F.S.). In order to reduce the occurrence of significant harm to the natural system under drought conditions, the Governing Board has established a Phase 3 (Extreme) water shortage restriction that will be

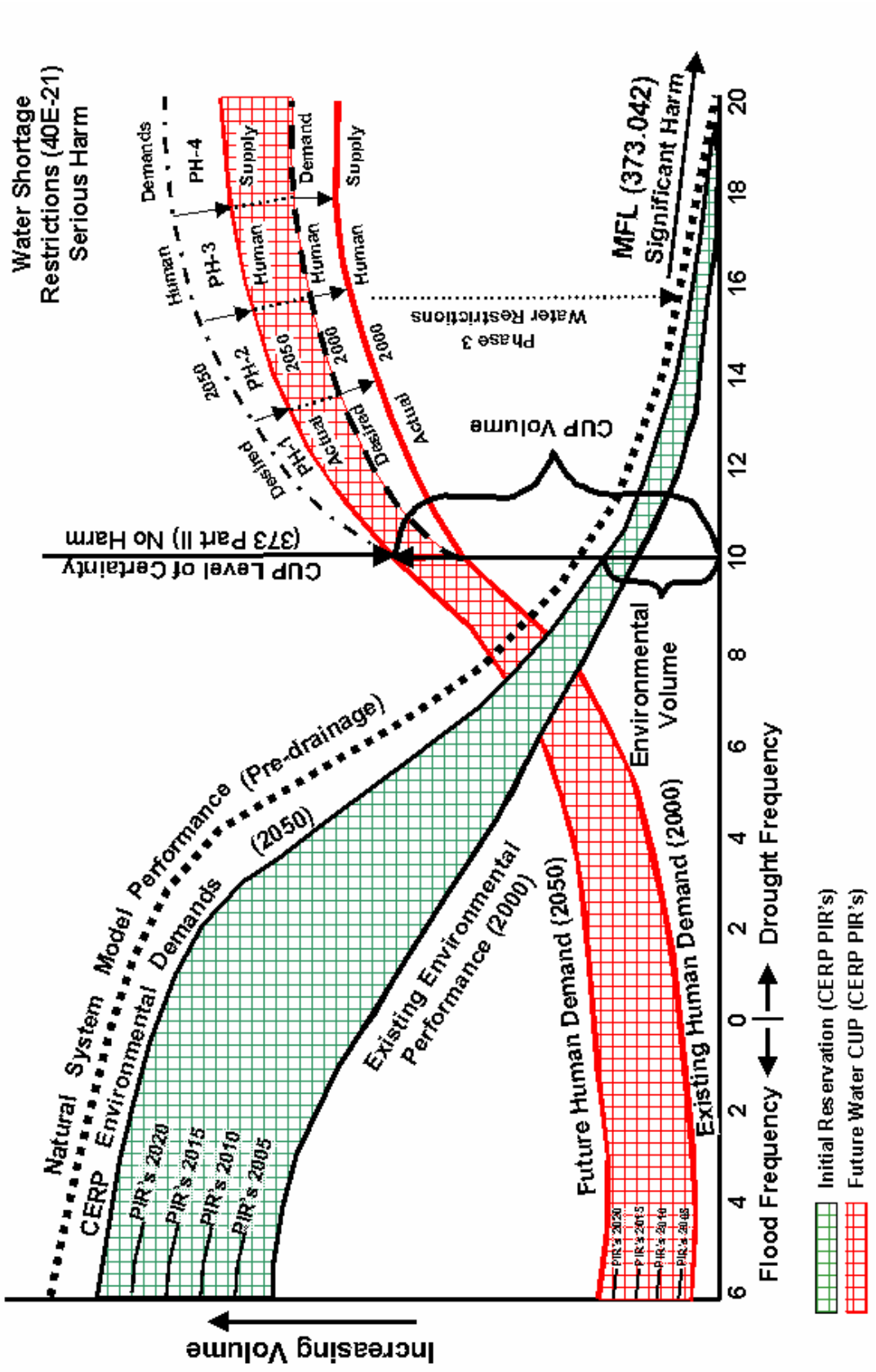
applied to human uses in order to moderate their demands, consistent with the conditions in Chapter 40E-21 and Chapter 40E-8, F.A.C. The relationships between minimum flows and levels, consumptive use permits and water shortage restrictions are shown in the diagram below.

Conceptual Relationship Among the Harm, Serious Harm and Significant Harm Standards



WRDA 2000 requires a quantification of water to be made available for the natural system as each PIR is developed. Furthermore, pursuant to the WRDA 2000 "Assurance of Project Benefits Agreement" between the President and Governor, reservations will be made under State law prior to a Project Cooperation Agreement (PCA) being executed. State law (Section 373.470, F.S.) requires the PIR to identify the increase in water supplies resulting from the project component and this additional water be allocated or reserved under Section 373, F.S. Most, but not all, CERP projects will make additional water available for the environment through time as illustrated in Figure 1. As each project is completed, environmental performance will progressively improve until the environmental response meets or exceeds that originally envisioned in the *April 1999 C&SF Project Comprehensive Review Study* as approved by Congress. The project specific and system-wide performance relative to water supply, flood protection, and environmental requirements will be evaluated as each PIR is developed and documented.

Figure 1. Conceptual Relationship of Water Demands for Human Uses and Environmental Systems



IV. Overview of Proposed Water Resource Protection Strategies for CERP Implementation Under Federal and State Law

A. Background

The overarching objective of the CERP under both State and Federal law is restoration and preservation of the South Florida ecosystem while providing for other water-related needs, including water supply and flood protection. An overview of the specific Federal and State legal requirements for CERP implementation is discussed in Section II A and B. In general, Federal law requires quantification and protection of existing legal sources and levels of service for flood protection existing as of December 2000. This will be accomplished through development of a December 2000 Pre-CERP Baseline for comparison with future CERP draft PIRs. Furthermore, Federal law requires the quantification of water made available by CERP projects, and protection of water made available for natural systems through water reservations under State law. State law requires protection of existing legal users of water and levels of service for flood protection through time during CERP design and implementation. In addition, State law requires quantification of water made available by CERP projects and reservation or allocation of water made available by CERP projects. State law also provides additional tools for protection of human and natural system water supplies through consumptive use permitting, water shortage management, minimum flows and levels, and regional water supply planning.

An overview of water supply and resource protection strategies to meet Federal and State legal requirements pertaining to CERP are provided in Sections B through F below.

B. Pre-CERP Baseline – Identification and Quantification of Existing Legal Sources and Levels of Service for Flood Protection Existing as of December 2000

Identification and quantification of existing legal sources (i.e., quantity and quality) and levels of service for flood protection existing as of December 2000 can be achieved through the development of a Pre-CERP Baseline. The Pre-CERP Baseline will be developed by updating regional and sub-regional modeling tools to reflect operational, structural, land use, and consumptive use withdrawal configurations of the South Florida ecosystem that existed as of December 2000. Once the Pre-CERP Baseline is developed, the December 2000 legal sources and levels of service for flood protection existing as of December 2000 will be identified and quantified as outlined in Section V.

The Pre-CERP Baseline will be compared with the tentatively selected plan identified in the PIR process to determine whether an elimination or transfer of the identified existing legal source(s) as of December 2000 has occurred. Furthermore, the Pre-CERP Baseline will be used for comparison between the tentatively selected plan to determine whether a reduction in levels of service for flood protection that existed as of December 2000 has occurred.

The Pre-CERP Baseline will also be used as an indicator of the December 2000 system performance and as the base condition for the initial CERP update. Therefore, the Pre-CERP Baseline will provide an indication of the expected performance improvement through time of CERP for the natural system and other water uses.

C. Existing Condition PIR Baseline – Identification and Quantification of Existing Legal Users, Identification and Quantification of Flood Protection Levels of Service Through Time

Identification and quantification of existing legal users and levels of service for flood protection through the development of Existing Condition PIR Baseline will assist in implementing the requirements of Section 373.1501(5), F.S. The Existing Condition PIR Baseline will be used as an indicator of the present system performance at the time of the PIR initiation and will serve as a reference point for formulating the goals and objectives of the PIR design.

The Existing Condition PIR Baseline will be developed for each project through time by updating the SFWMM or sub-regional models to reflect the operational, structural, land use, and consumptive use withdrawal configurations of the South Florida ecosystem that exist at the time of initiation of each PIR. These updates will include structural and operational features of previously constructed PIRs, constructed non-CERP projects with approved operational plans (e.g., C-111, Modified Water Deliveries, STAs), other non-CERP operational changes which have been implemented (e.g., rainfall driven formulas, etc.) and permitted quantities of consumptive users. The Existing Condition PIR Baseline will be compared with the tentatively selected plan to determine whether there is potential for adverse impact on existing legal users and whether the level of flood protection has been diminished outside the geographic area of the project.

D. PIR Tentatively Selected Plan - Protection of Existing Legal Sources and Levels of Service for Flood Protection Existing as of December 2000 and Protection of Existing Legal Users and Levels of Service for Flood Protection Through Time

The Federal requirement of protecting the December 2000 legal sources and levels of service for flood protection will be demonstrated by the comparison of the PIR tentatively selected plan to the Pre-CERP Baseline. Likewise, protection of existing legal users and protection of levels of service for flood protection through time will be determined through the comparison of the tentatively selected plan to the Existing Condition PIR Baseline.

As each tentatively selected plan is developed through the PIR, a comparison will always be made to the December 2000 Pre-CERP Baseline quantification of existing legal sources to determine whether an elimination or transfer of the identified existing legal sources has occurred. This comparison will be made with a separate model run which includes only the current and previously approved CERP projects with their associated structural and operational features inserted into the December 2000 Pre-CERP Baseline condition. This model run will then be post-processed into the same performance criteria as the existing legal source performance criteria. If it is determined through the review of the performance criteria that an elimination or transfer of an existing legal source, either in quantity or quality, has occurred, the tentatively selected plan for the project must make up for the elimination and transfer or be revised to protect the existing legal source. Likewise, as each tentatively selected plan is developed through the PIR, a comparison will be made to the Pre-CERP Baseline quantification of the level of service of flood protection existing as of December 2000 to determine whether a reduction in the level of service has occurred. If it is determined a reduction in the level of service has

occurred, the tentatively selected plan for the project must be modified to eliminate the reduction.

Additionally, after the tentatively selected plan is identified in the PIR process, a comparison will also be made to the Existing Condition PIR Baseline to determine whether the water supply performance of existing legal users at the time of PIR development have been diminished. This comparison will be made by a separate model run which includes only the current and previously approved CERP projects, with their associated structural and operational features inserted into the Existing Condition PIR Baseline. This model run will be post-processed into the same performance criteria as the existing legal users performance criteria. If it is determined that the water supply performance has been diminished so as to adversely impact existing legal users, the tentatively selected plan must be revised until existing legal users are shown not to be adversely impacted.

Likewise, as each tentatively selected plan is developed through the PIR process, a comparison will always be made to the Existing Condition PIR Baseline to determine whether the level of service for flood protection at the time of PIR development has been diminished outside the geographic area of the project. If it is determined that a diminished level of service for flood protection has occurred, the tentatively selected plan must be revised to protect the level of service. However, it should be recognized that incidental flood protection improvements provided by a project, which are over and above that which was previously protected or designed, should not have to be protected by future CERP projects. These situations will have to be reviewed and analyzed on a case by case basis.

E. Draft PIR – Quantification of Additional Water Made Available for the Natural System and Quantification of Additional Water Made Available for Other Uses

The draft PIR must include the quantification of additional water made available for the natural system and additional water made available for other uses from the project. Once the tentatively selected plan has been determined to meet the legal protection requirements outlined in Section IV. D above and the project goals and objectives of the CERP restoration, the additional water made available by the project must be documented in the draft PIR. This documentation is expected to take the form of performance criteria, including volume probability curves, which will be developed for both the Existing Condition PIR Baseline and the PIR tentatively selected plan. Documenting the difference between these performance criteria will reflect the total additional water made available by the project. A certain portion of the deliveries associated with the tentatively selected plan may be directed to the natural system to meet restoration objectives, and another portion of water may be directed to other uses (i.e. consumptive uses or non-consumptive uses, such as for resource protection). In order to satisfy State and Federal legal requirements, these two quantities must be documented separately and will be further discussed in Section VIII.

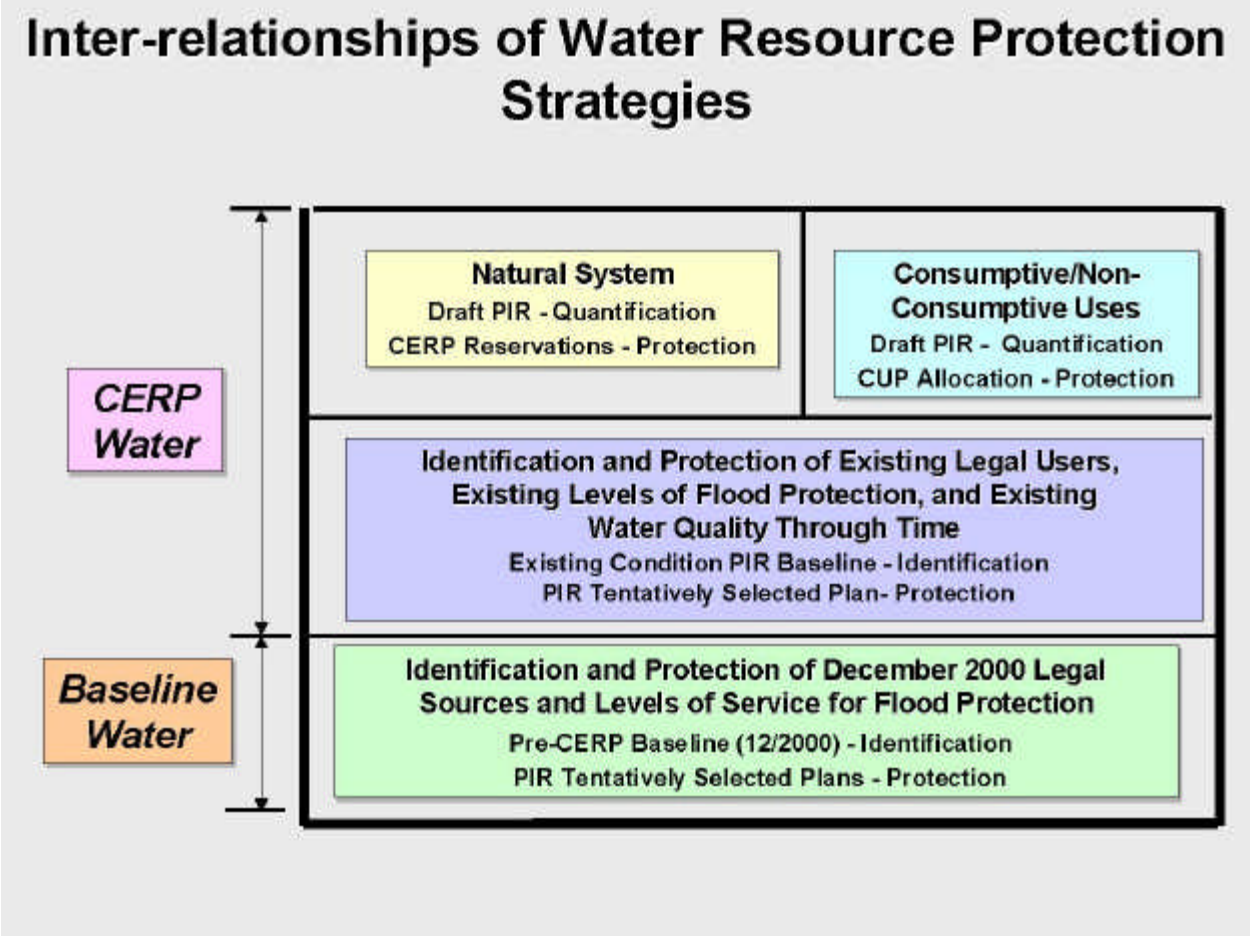
The additional water made available for natural systems is anticipated to be quantified on a project and system-wide basis. This quantification is expected to be documented by a series of performance criteria, including volume probability curves, which reflect the total water made available to the natural system for the protection of fish and wildlife. The volume probability

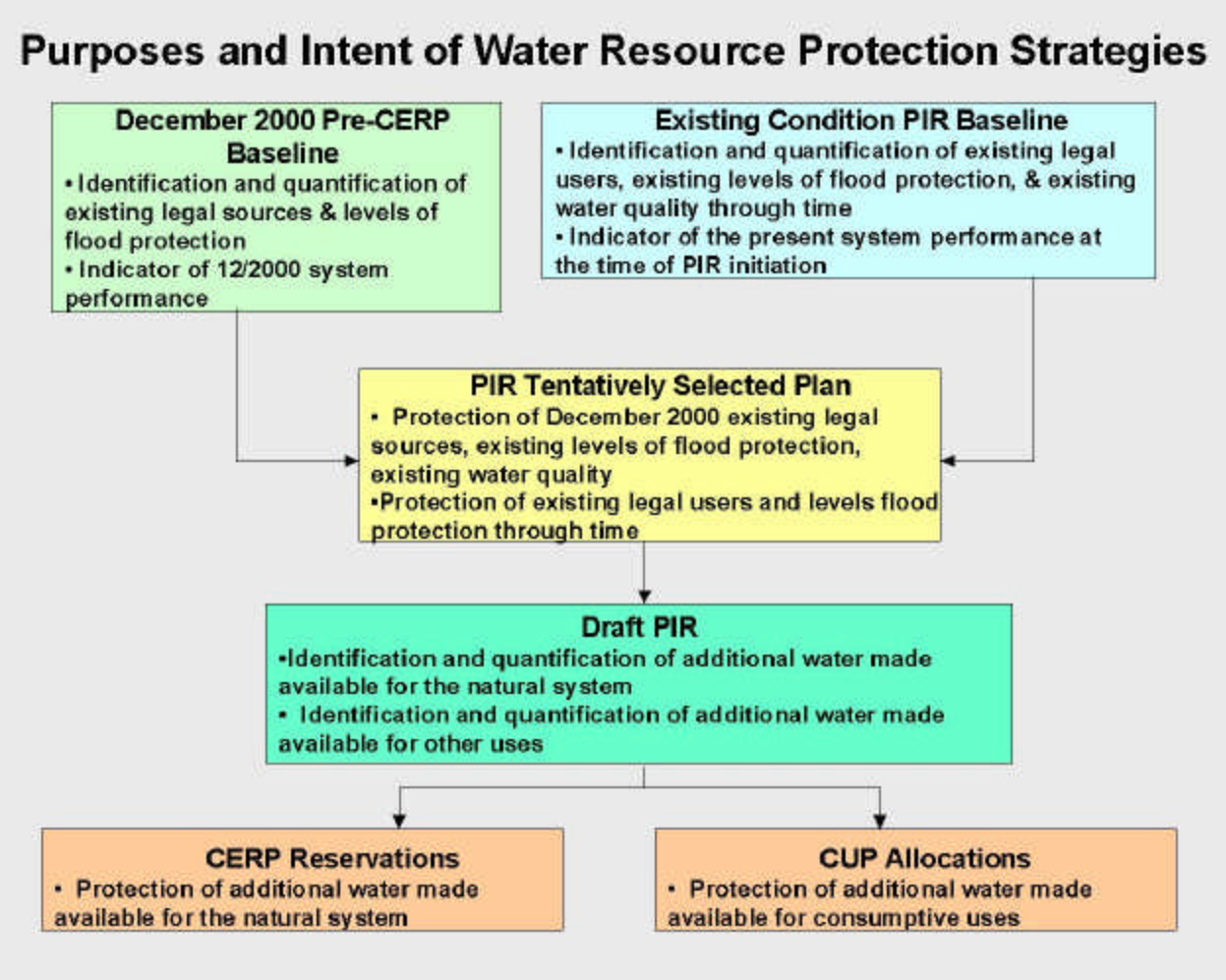
curves may be supplemented by additional performance criteria that graphically illustrate the cumulative regional natural system benefits resulting from the current and all past projects. If an environmental component has been identified within the project's boundary, then the volume necessary to protect the fish and wildlife values of that environmental component must also be quantified; however, this quantification will be documented on a local project level basis.

F. Establishing Water Reservations - Protection of Additional Water Made Available for the Natural System

The water to be reserved for the natural system will be determined from the additional water made available by the project as discussed in Section E above. This volume will be incorporated into a water reservation under State law prior to execution of the Project Cooperation Agreement (PCA). It is anticipated that as each PIR is finalized, the reservation will be revised to reflect the additional water made available for the natural system by the latest project; therefore, a cumulative total of natural system water may be appropriately reserved for the protection of fish and wildlife. Furthermore, the rule will be conditioned to reflect that the reserved water will not have a legal requirement to be delivered until the project is constructed, operated, tested and a final operating manual is approved.

The following diagrams show the inter-relationships of the water supply and resource protection strategies discussed in Sections B through F above.





V. Identification and Quantification of Existing Legal Sources of Water and Levels of Service for Flood Protection Existing as of December 2000 through the Development of a Pre-CERP Baseline

A. Background

The following section presents basic precepts in the identification of the Pre-CERP Baseline and a proposed technical approach for identifying and quantifying existing legal sources and levels of service for flood protection existing as of December 2000. Guiding principles for defining the Pre-CERP Baseline are discussed in Section V. B. Proposed methods for identifying and quantifying existing legal sources as of December 2000 are discussed in Sections V. C and V. D, respectively. Identification and quantification of levels of service for flood protection existing as of December 2000 are discussed in Section V. E. Guidance for protecting existing legal sources and levels of service for flood protection through the development of each PIR tentatively selected plan is discussed in Section VII.

The Pre-CERP Baseline and the resultant identification of existing legal sources and levels of service for flood protection will primarily be used to satisfy Federal legal requirements of WRDA 2000 Section 601(h)(5), pertaining to future CERP implementation. The Pre-CERP Baseline (not the resultant existing legal source identification) will also be used as an indicator of the December 2000 system performance and as the base condition for the initial CERP update (ICU). Therefore, the Pre-CERP Baseline when compared to the initial CERP update and implementation schedule simulations will provide an indication of the expected performance improvement through time of CERP for the natural system and other water uses.

B. Guiding Principles for Defining the December 2000 Pre-CERP Baseline

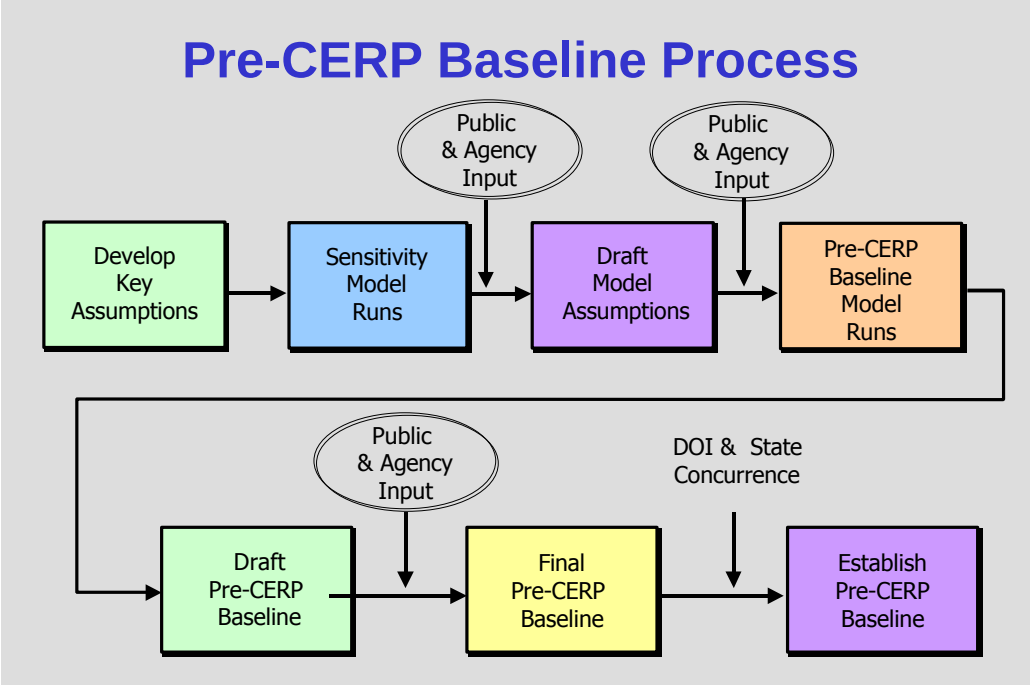
In order to meet legal requirements under Federal and State law, it is necessary to identify a Pre-CERP Baseline that reflects the timing, quantity, distribution, and quality of water from various sources under December 2000 Pre-CERP conditions within the South Florida ecosystem. This quantification is proposed to be accomplished through a Pre-CERP Baseline regional or sub-regional modeling simulation; however, the assumptions in the model first need to be defined. The December 2000 Pre-CERP Baseline is proposed to include structural, operational, and demand assumptions as of that date for determination of existing legal sources under State and Federal law.

As a general principle, the Pre-CERP Baseline conditions will be based on the assumptions in the *April 1999 C&SF Project Comprehensive Review Study* and the 1995 base case of the *Lower East Coast Regional Water Supply Plan* updated to December 2000 conditions (Appendix D). This is necessary because WRDA 2000 contemplates protection of existing legal sources and levels of service for flood protection existing as of the date of enactment on December 11, 2000.

The Pre-CERP Baseline condition should reflect as accurately as possible conditions that existed as of December 2000, while recognizing that further protections may be afforded under other provisions of Federal or State law with respect to minimum deliveries to Everglades National Park, entitlement rights to the Seminole Tribe or State water use permits. WRDA 2000 does not affect these other protections, nor is it the intent of the definition of existing legal sources to do so.

An on-going public process has included workshops and continued interaction with the Water Resources Advisory Commission (WRAC) and the South Florida Ecosystem Restoration Task Force and Working Group for the purposes of identifying the assumptions to be used in the Pre-CERP Baseline through a consensus process. Presentations of regional modeling results of various scenarios have framed the ramifications of outstanding issues.

An interagency team, along with a sub-committee of WRAC, has been formed to help identify the Pre-CERP base case assumptions. This team has held numerous meetings in order to identify and discuss outstanding issues presented in Appendix D. A diagram of the Pre-CERP Baseline identification process is presented below:



C. Identification of Existing Legal Sources as of December 2000

WRDA 2000 includes assurance language that provides for protection of existing legal sources as of the date of enactment, December 11, 2000, as identified in Section 601(h)(5). These existing legal source considerations include agricultural and urban water supply, allocation or entitlement to the Seminole Tribe of Florida, the Miccosukee Tribe, water supply for Everglades National Park and water supply for fish and wildlife**.**

Since WRDA 2000 specifically requires protection of existing legal sources as of the date of enactment, identification of existing legal sources will require the development of a Pre-CERP Baseline condition that can be simulated using the SFWMM under 2000 conditions. The documentation of existing legal sources, based on the Pre-CERP Baseline condition, will be used for comparison during the design of each CERP project to determine whether the eventual implementation of the project will result in an elimination or transfer of the existing legal source.

The proposed existing legal source definition below is the result of public process meetings involving inter-agency representatives and sub-committee members of WRAC; however, no formal consensus has been reached on this proposed definition:

> For purposes of implementing the "Savings Clause" in Section 601(h)(5)(A) of WRDA 2000, "existing legal sources" are the sources of water available to a water user basin within the South Florida ecosystem from all locations (including seepage, surface water, and groundwater) used as a water supply, including the water necessary for protection of the source of supply, as of December 11, 2000, consistent with Federal and State law, for:

(1) an agricultural or urban water supply;
(2) allocation or entitlement to the Seminole Tribe of Florida under section 7 of the Seminole Indian Land Claims Settlement Act of 1987 (25 U.S.C. 1772e);
(3) the Miccosukee Tribe of Indians of Florida;
(4) water supply for Everglades National Park; or
(5) water supply for fish and wildlife.

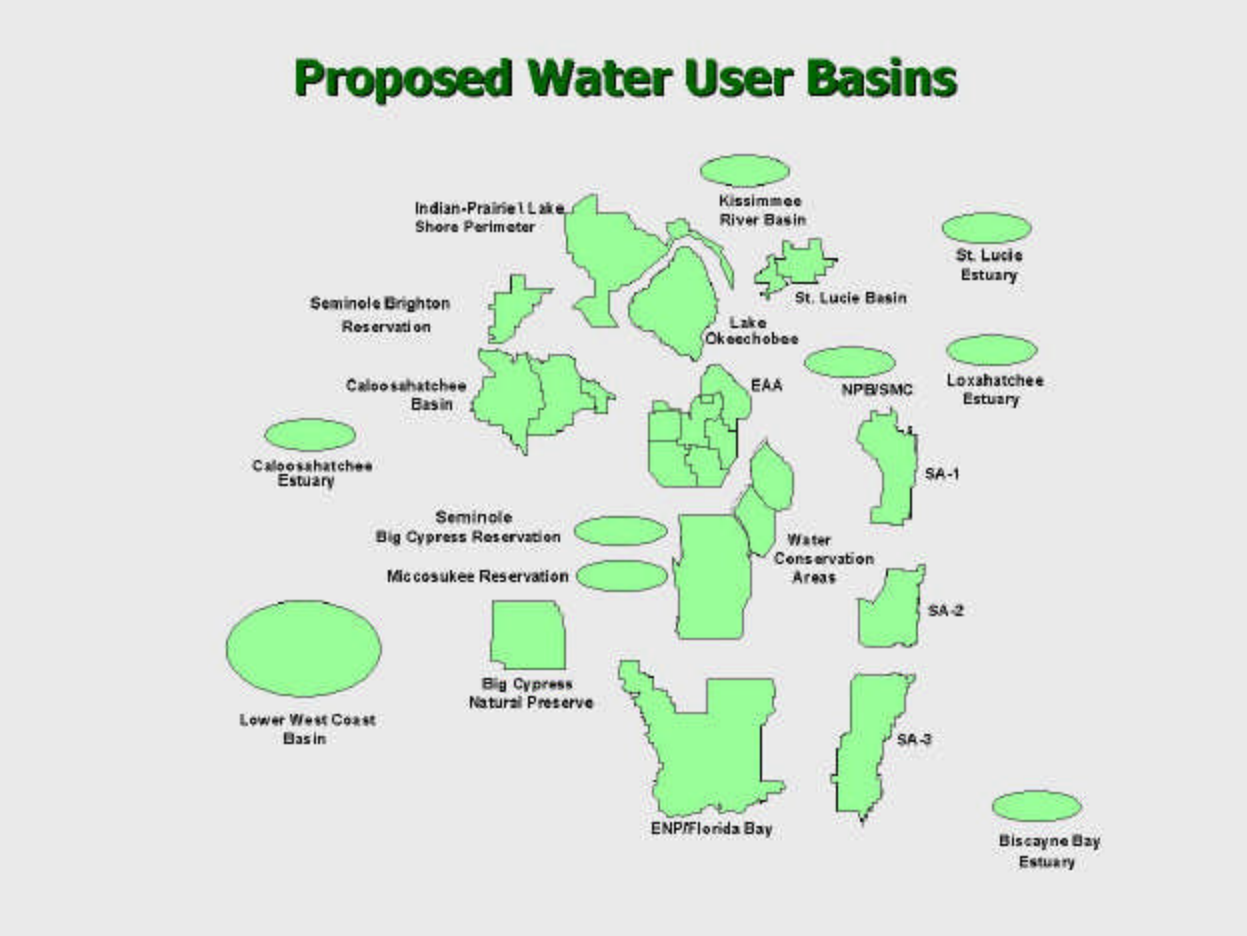
Note:

"Existing legal sources are proposed to be documented under the full range of historical rainfall conditions to determine the water available under the operational, structural and demand conditions that existed as of December 2000. The *April 1999 C&SF Project Comprehensive Review Study* considered a hydrologic period of record of 1965 through 1995. This 31-year historical rainfall period of record, which included wet, average and dry rainfall periods, was used to estimate the performance of various CERP components relative to water supply, ecosystem restoration and some limited flood protection. The SFWMM is currently being updated to expand the hydrologic (rainfall) record to 36 years from 1965 through December 2000, and this is proposed to be the tool and historical rainfall period of record used in the determination of existing legal sources consistent with the future CERP performance analysis. Sub-regional models, using a similar historical rainfall period of record, will need to be developed to address existing legal sources for CERP projects outside of the regional model boundary. Future updates to the SFWMM will continue to expand the historical rainfall period, typically every five years.

The primary available sources of water include: 1) local surface water storage; 2) groundwater from the Biscayne and other aquifers; 3) surface water discharge and groundwater seepage from the Water Conservation Areas; and 4) surface water from Lake Okeechobee. One or more of these sources have been utilized for the protection of fish and wildlife, or as a water supply source for urban, agricultural, or Tribal uses, depending on wet, average or dry rainfall conditions. Spatially separating the major regions of the C&SF project into water user basins in order to properly determine each entity's existing legal sources is proposed. Proposed water user basins are described in Table 1 and shown in the figure below:

Table 1. Spatial Identification of Water User Basins

WATER USER BASINS	SOURCE DEPENDENCE			
	WCAs	**Lake Okeechobee**	**Local Basin Storage/Run off**	**Surficial Aquifer**
Agriculture				
a. Indian Prairie/Lake Shore Area		X	X	
b. EAA	X	X	X	
c. Calooshatchee		X	X	
d. St. Lucie		X	X	
Seminole Tribe				
a. Brighton Reservation		X	X	
b. Big Cypress Reservation		X	X	
Miccosukee Tribe				
a. Miccosukee Reservation	X		X	
Environmental				
a. Big Cypress Nat'l. Preserve	X		X	X
b. WCAs 1,2,3	X	X	X	X
c. ENP	WCA3	X	X	X
d. Holey Land		X	X	
e. Rotenberger			X	
f. Caloosahatchee Estuary		X	X	
g. St. Lucie Estuary		X	X	X
h. Loxahatchee Estuary			X	X
i. Biscayne National Park	X	X	X	X
j. Florida Bay	X	X	X	X
k. Lake Okeechobee		Kiss.River	X	
l. Kissimmee River			X	
Urban				
a. Service Area 1	WCA 1	X	X	X
b. Service Area 2	WCA2B	X	X	X
c. Service Area 3	WCA3B	X	X	X
d. N. Palm Bch Co./S. Martin Co.			X	X
e. Lower West Coast Basin			X	X



D. Quantification of Existing Legal Sources Through Development of the December 2000 Pre-CERP Baseline

Under the December 2000 Pre-CERP Baseline condition, agriculture, urban and environmental systems receive a certain quantity, quality, timing and distribution of water from various sources including upstream inflows, tributary basin runoff and direct rainfall. The hydropatterns of the existing natural systems and the performance of water supply are reflective of the operational policies in place for the region as defined by Federal regulation schedules, conveyance limitations, water control structure hydraulics for flood protection, water supply, resource protection and natural system deliveries. These operational protocols are also reflective of existing consumptive use demands and non-consumptive use delivery requirements from the regional system under the Pre-CERP Baseline condition.

The December 2000 Pre-CERP Baseline will be simulated at the project and system-wide level to estimate the amount of water available to the natural system and other uses assuming historical rainfall conditions of 1965 through 2000, along with the baseline condition structural components, operational protocols, consumptive use withdrawals and water shortage policies in place as of December 2000. The performance of the system as of December 2000 will be

documented under historical wet, average and dry rainfall conditions. This performance will be documented by a combination of agreed upon performance criteria for water supply and fish and wildlife protection for the natural system.

Regulatory discharges to tide from the various water user basins will be excluded from consideration under these agreed upon performance criteria. Therefore, these discharges will be excluded in the existing legal source definition, if these discharges were not depended upon by consumptive uses, or were not beneficial to the natural system, under historical rainfall conditions. A significant portion of these regulatory discharges will eventually be captured as part of the CERP program.

These performance measures will be identified for the water user basins identified above, and will be consistent with performance measures used in the *April 1999 C&SF Project Comprehensive Review Study* and the *LECRWSP*, updated to include new science. The key performance measures that will be used to quantify existing legal sources are identified below:

- **Kissimmee River Basin –** Volume delivered which falls within flow restoration targets
- **Lake Okeechobee** – Volume delivered which falls within desired lake stage targets which are beneficial to fish and wildlife
- **LOSA Agricultural Areas –** Demands not met, volumes delivered from Lake Okeechobee
- **Urban Service Areas –** Water shortage frequencies, volumes delivered from respective WCA's and Lake Okeechobee
- **Estuaries –** Volume delivered which falls within desired salinity envelopes
- **WCA's –** Number and spatial location of NSM hydropattern matches, volume delivered from Lake Okeechobee, and volume delivered from EAA/STAs which is beneficial to fish and wildlife.
- **Big Cypress National Preserve** - Number and spatial location of NSM hydropattern matches
- **ENP –** Number and spatial location of NSM hydropattern matches; beneficial volume delivered from WCAs
- **Seminole Tribe** – Demands not met, entitlement met, deliveries from Lake Okeechobee
- **Miccosukee Tribe** – Water supply for Miccosukee Tribe to the extent required by Federal law

In addition to the identification and quantification of source water for each water user basin outlined above, the project delivery teams will also be responsible for water quality assessments that provide a reasonable characterization of the December 2000 quality of the source water. Not every impact on water quality should be attributed to mean an impact that causes the water to be unusable for the purpose it had been used for as a source on December 2000. This water quality characterization will be used for future comparisons if a CERP project transfers a source in the water user basins identified in Table 1.

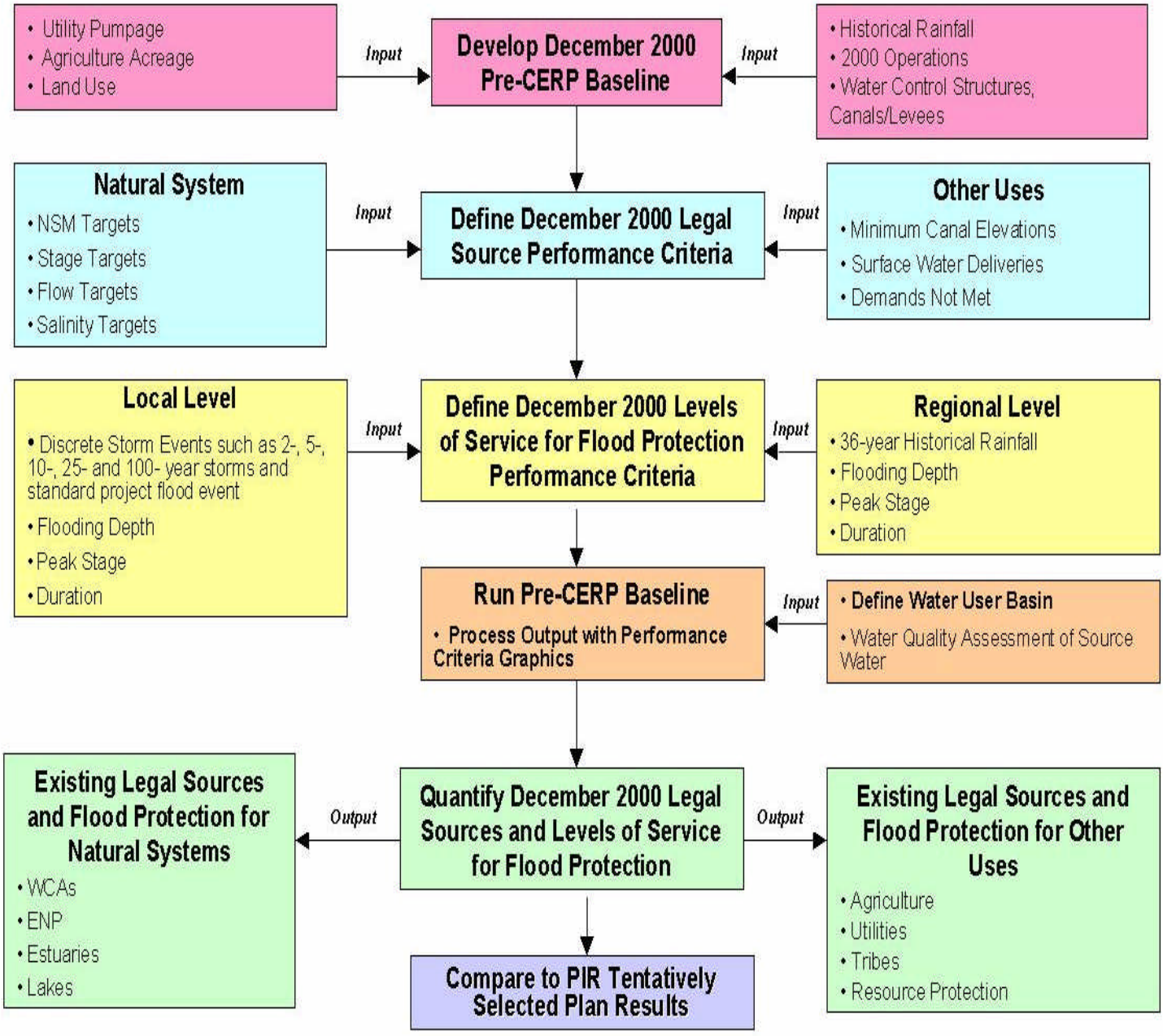
E. Identification and Quantification of Levels of Service for Flood Protection Existing as December 2000

Section 601(h)(5) states that implementation of the CERP plan shall not reduce the levels of service for flood protection that were in existence on the date of enactment of WRDA 2000 and in accordance with applicable law.

The level of service for flood protection existing as December 2000 will be estimated in the Pre-CERP Baseline assumptions by reflecting the topography, land uses, canal systems and water control structure hydraulics of the regional system. The December 2000 levels of service for flood protection will be quantified by post-processing the output from the SFWMM and project level models to reflect the system performance of the region over the 36 year period of historical rainfall. Outputs from the SFWMM, such as ponding depth and ponding duration, are proposed to be similar to those used in the development of the CERP and the *Lower East Coast Regional Water Supply Plan.* In addition to the regional model estimate of the levels of service for flood protection for CERP projects that fall outside the regional model boundaries, project level models will typically document the flood protection performance within the basin for which the CERP project will be designed based on December 2000 conditions. Performance measure outputs of the site-specific models, when appropriate, are proposed to be flooding depth, peak stage, and duration from discreet storm events that may include 1:2, 1:5, 1:10, 1:25 and 1:100 year storms, and the standard project flood (SPF) condition. The identified December 2000 levels of flood protection cannot be diminished in the future as a result of the implementation of a CERP project as discussed in Section IV.

The following flowchart summarizes the basic precepts in the identification and quantification of existing legal sources of water and the levels of service for flood protection existing as December 2000 through the development of the Pre-CERP Baseline.

Identification and Quantification of Existing Legal Sources of Water and Levels of Service of Flood Protection Existing As of December 2000 Through the Development of the Pre-CERP Baseline



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VI. Identification and Quantification of Existing Legal Users, Flood Protection Levels of Service and Natural System Performance through Time by Development of the Existing Condition PIR Baseline

A. Background

Identification and quantification of existing legal users and levels of service for flood protection through the development of Existing Condition PIR Baseline is proposed for complying with Section 373.1501(5) F.S. Furthermore, State law requires protection of existing legal users when establishing water reservations for the natural system; therefore, these existing users must be considered as a base assumption as each PIR is developed. The Existing Condition PIR Baseline will also be used as an indicator of the present system performance at the time of the PIR initiation; therefore, this baseline will also serve as a reference point for identifying the goals and objectives of the PIR project.

The criteria for State approval of CERP projects related to water supply requires that prior to transmittal of a PIR to Congress for approval and prior to the appropriation of State funds for construction, the South Florida Water Management District to "…provide reasonable assurances that the quantity of water available to existing legal users shall not be diminished by implementation of project components so as to adversely impact existing legal users…" . This requirement necessitates a quantification of the amount of water permitted to all existing legal users at the time a PIR is initiated. This quantification will be included in the Existing Condition PIR Baseline run which will be compared to the tentatively selected plan to examine the potential impact of a proposed project on the quantity and quality of water for the existing legal users. Furthermore, the levels of service of flood protection at the time the PIR is initiated must be documented so that it is assured that a proposed CERP project does not diminish this level of service through implementation of the project.

B. Developing the Existing Condition PIR Baseline

The Existing Condition PIR Baseline will be developed by updating the SFWMM to reflect the operational, structural, land use, and consumptive use withdrawal configurations of the South Florida ecosystem that exist at the time of initiation of each PIR. These updates will also include structural and operational features of previously constructed PIRs, constructed non-CERP projects with approved operational plans (e.g. C-111, Modified Water Deliveries, STAs, etc.), other non-CERP operational changes (e.g., rainfall driven formulas, etc., and permitted quantities of consumptive users) which coincide with the time of PIR initiation.

C. Identification and Quantification of Existing Legal Users

The permitted allocations of existing legal users corresponding to the timeframe of PIR initiation and the permit conditions will be included in the Existing Condition PIR Baseline assumptions, and their performance will be quantified by post-processing the output from the SFWMM. Under State law, existing legal users are those that have a consumptive use permit or are exempt from permitting requirements, such as domestic users. If the permit allocation influences regional system seepage and is contingent upon the permittee first implementing alternative

sources to offset any increased regional seepage, then the assumptions in the model will be either: 1) a portion of the permit allocation based on the existing level of offset already implemented at the time of the PIR, or 2) the full permit allocation, if the full offset has been implemented. For allocations that influence the regional system which are not contingent upon some initial action by the permittee, then the assumption in the models will be for the full permit allocation.

The modeling output will be processed into a discrete set of performance measures that reflect the water supply performance for the existing legal users. For water users outside of the limits of the regional model, site-specific integrated surface water and groundwater models will be developed with similar performance measures. These performance measures are proposed to be similar to those used in the development of the CERP and the *Lower East Coast Regional Water Supply Plan*. The same geographic areas will be used as outlined in Section V as water user basins, however, only for the water supply related basins. Specifically, the following basins are proposed:

Water User Basins for Existing Legal User Protection

Everglades Agricultural Area Basin
St. Lucie Agricultural Basin
Indian Prairie/Lake Shore Area Basin
Caloosahatchee Agricultural Basin
Service Area 1
Service Area 2
Service Area 3
Northern Palm Beach County Basin
Seminole Tribe Reservations
C-23, C-24, C-25 Basins (IRL)
South West Florida Basins
Kissimmee River Basin

Performance measure output will generally consist of the frequency of water shortages over the rainfall period of record, demands not met, and a characterization of the water quality of the existing supply.

D. Identification and Quantification of Levels of Service for Flood Protection

The levels of service for flood protection, relevant under State law, will be included in the Existing Condition PIR Baseline assumptions by reflecting the topography, land uses, operations, canal systems and water control structure hydraulics of the regional system. The levels of service for flood protection will be quantified by post-processing the output from the SFWMM to reflect system performance of the region over the 36-year period of historical rainfall. Output from the regional model is proposed to be similar to that used in the development of the CERP and *the Lower East Coast Regional Water Supply Plan*, such as ponding depth and ponding duration. Additionally, the site-specific models for each project will document the flood protection within the basin for which the project will be designed. Outputs of the site-specific

models are proposed to be flooding depth, peak stage and duration during discreet storm events if required, including 1:2, 1:5, 1:10, 1:25 and 1:100 year storms, and the standard project flood condition (SPF).

E. Identification and Quantification of Existing Natural System Performance

Generally, the SFWMM will be used to document the environmental performance of the regional system through the Existing Condition PIR Baseline. At the project level, site-specific integrated surface water and groundwater models will be developed to document the environmental attributes of the existing natural system. The existing condition of the natural system will be documented through performance measures such as NSM hydropattern matches, ponding depth, ponding duration, volumes delivered which fall within appropriate salinity envelopes, etc. for future comparison of the existing condition with the tentatively selected plan of the draft PIR (Section VII).

The following flow chart summarizes the basic precepts in the identification and quantification of existing legal users, flood protection levels of service and natural system performance through time by development of the Existing Condition PIR Baseline

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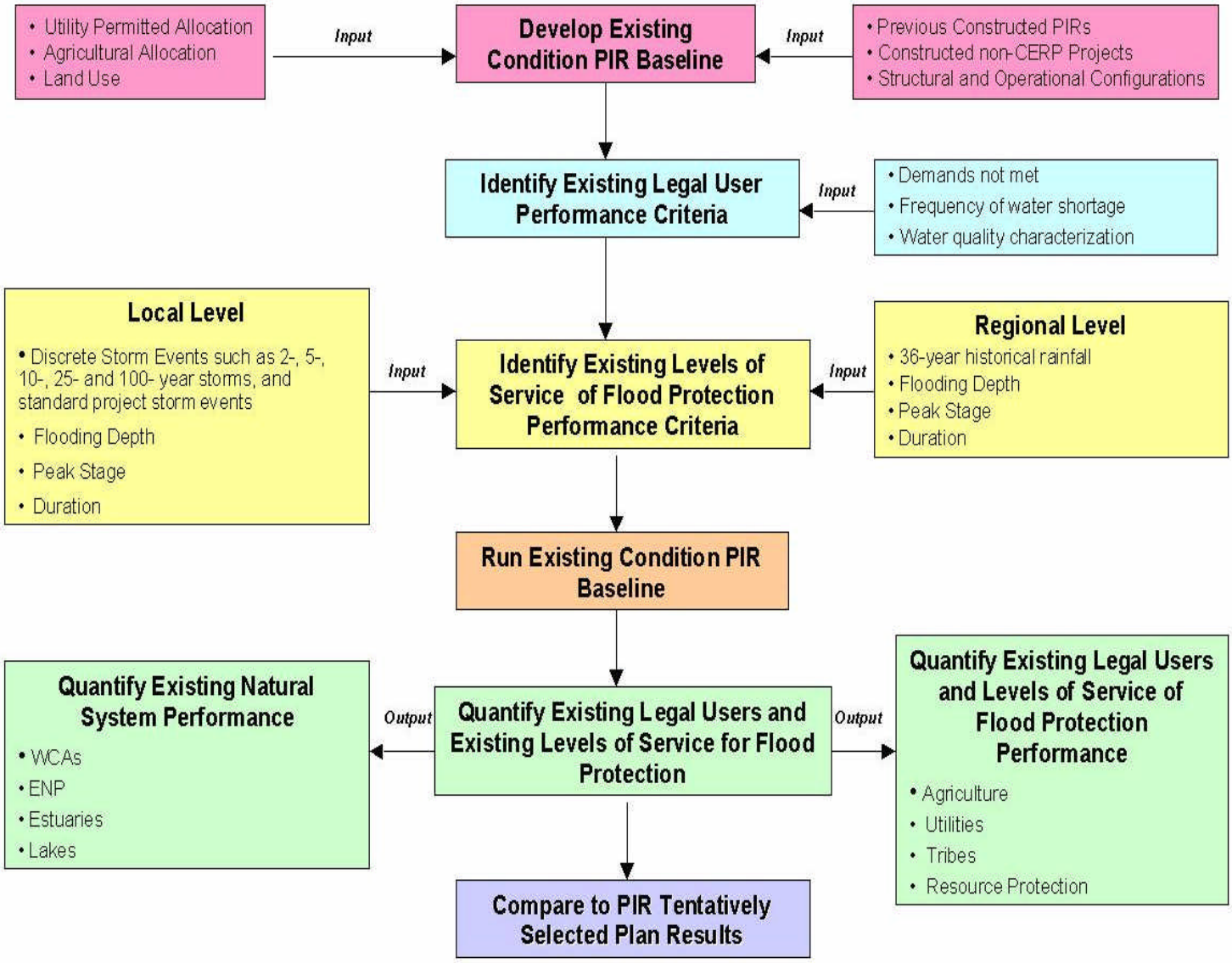
Identification and Quantification of Existing Legal Users and Flood Protection Levels of Service Through Time by Development of Existing Condition PIR Baseline



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VII. Protection of Existing Legal Sources and Levels of Flood Protection Existing as of December 2000; and Protection of Existing Legal Users and Existing Levels of Service for Flood Protection through Time During Development of the PIR Tentatively Selected Plan

A. Background

Development of the PIR tentatively selected plan will begin by adding previously approved but not constructed CERP and non-CERP projects to the Existing Condition PIR Baseline. Next, 2050 demands and land use will be estimated for agriculture, urban and natural system uses. Regional and project specific computer models may be utilized and developed which contain the site characteristics of the proposed CERP projects such as available storage, inflow and outflow structures. A set of operational rules will be developed for determining how, when and where water is discharged into and out of the proposed facility. In addition, a set of historical rainfall data will be applied which typically reflect wet, average, and dry rainfall conditions unique to the proposed spatial location of the proposed facility. The data sets described above will be included in the model simulations. Once these simulations are completed, the model output will be post-processed to generate graphical formats consistent with the identified evaluation criteria and the results will be reviewed. Several iterations of tentatively selected plan analysis through model simulations may be necessary to optimize the performance of the proposed facility, taking into account the goals and objectives defined for flood protection, water supply, water quality, and natural system restoration. Once complete, this analysis will result in the draft PIR tentatively selected plan. A flow chart summarizing this process is located at the end of this section.

As the tentatively selected plan is developed through the PIR, the first test will be to determine whether the plan meets the goals and objectives of CERP. If so, the next steps will be to compare the performance of the PIR tentatively selected plan with the performance measures identified in Sections V and VI to determine whether: 1) an elimination or transfer of the quantity or quality of existing legal sources, or a reduction of flood protection existing as of December 2000 has occurred; 2) a reduction in the water supply performance of existing legal users has occurred; or 3) the level of flood protection has been diminished outside the geographic area of the project. This action is intended to satisfy the requirements of Section 601(h)(5) of WRDA 2000 and Section 373.1501(5) F.S.

B. Protection of Existing Legal Sources from Elimination or Transfer as of December 2000 During Development of the PIR Tentatively Selected Plan

WRDA 2000 states: "until a new source of water supply of comparable quantity and quality as that available on December 2000 is available to replace the water to be lost as a result of implementation of the Plan, the Secretary and the non-Federal sponsor shall not eliminate or transfer existing legal sources of water." Some CERP projects will provide additional storage to capture excess storm water, while other projects will reduce losses from a basin, such as through seepage control. Both types of projects may result in an elimination or transfer of water; however, the water quantity or quality implications of these types of projects may be quite different. While additional storm water storage may have large volume benefits, the water

quality may be less than desirable dependent on the ultimate use. Conversely, seepage control may not deliver additional water, but will retain more groundwater in a water user basin with fewer potential water quality issues, especially for environmental areas.

In order to evaluate a proposed CERP project's potential impact on a water user basin, the SFWMM or sub-regional models will initially be used to determine the effects of the proposed design on existing legal sources. However, because the PIR contains future land use, demands, and non-CERP projects, the PIR tentatively selected plan must first be normalized. This normalization will occur by inserting the tentatively selected plan structural and operational features along with the other previously approved CERP projects into the December 2000 Pre-CERP Baseline which contains the 2000 demands and land use. The same existing legal source performance measures agreed upon from the output of the December 2000 Pre-CERP Baseline should be generated by the models reflective of the design of the proposed CERP project prior to finalization of the PIR. The performance measures of the normalized PIR tentatively selected plan should then be compared to the existing legal source performance measures of the Pre-CERP Baseline and a determination made as to whether there has been an elimination or transfer of the existing legal source for any water user basin.

An assessment of water quality will also need to be developed providing a reasonable estimate of the expected water quality of the proposed project. This water quality assessment, conducted either by using monitoring data or from specialized water quality models, will then be used to compare the change in water quality of the proposed project with the original water quality of the source water identified in Section V. If there is an elimination or transfer of water caused by the project, then the predictive quality of the water generated by the proposed project (i.e., replacement source) must be of comparable quality to that of the existing source.

If the existing legal source has not been eliminated or transferred by the proposed CERP project, the PIR tentatively selected plan should: 1) contain all the necessary documentation supporting the conclusion; and 2) affirm that the existing source water is not eliminated or transferred by the project.

However, if the existing legal source has been eliminated or transferred by the tentatively selected plan, the PIR should: 1) document the performance measures of the water user basins subject to the elimination or transfer; 2) identify the new or replacement source; 3) document how the project, as designed, makes up for the volume eliminated or transferred; 4) provide a water quality analysis documenting that the water quality of the new source water from the proposed project will be comparable to that of the existing source water quality; 5) affirm that the existing source volume will not be transferred or eliminated until final construction testing and operations of the proposed facility; and 6) include revised water user basin performance measures for the affected basins which would be used by subsequent PIRs.

C. Protection of Levels of Service for Flood Protection Existing as of December 2000 During Development of the PIR Tentatively Selected Plan

Federal law provides a savings clause for maintenance of flood protection as of December 2000. Specifically, Section 601(h)(5) states that implementation of the CERP plan shall not reduce the

levels for flood protection that are in existence on the date of enactment of WRDA 2000, and in accordance with applicable law.

The levels of service of flood protection existing as of December 2000 will be documented in the Pre-CERP Baseline as discussed in Section V. Potential impacts to the levels of service for flood protection will be determined by normalizing the output from the tentatively selected plan. This normalization will be accomplished by inserting the tentatively selected plan, plus all the previously approved CERP projects into the December 2000 Pre-CERP Baseline. Since the SFWMM consists of a 2-mile by 2-mile grid system, only a general indication of flood protection can be determined through regional analysis. For that reason site specific integrated ground and surface water models may also be developed for each PIR for specific analysis of levels of service for flood protection.

The same general water user basin areas as outlined in Section V will be used by the SFWMM or sub-regional models to evaluate the potential for flooding impacts caused by a proposed project. Site specific models utilized for evaluation within the geographic influence of the proposed project will also need to be scrutinized for potential flooding depending on the effects of the proposed project.

Outputs from the regional model are proposed to be similar to those used in the development of the CERP and the *Lower East Coast Regional Water Supply Plan*, such as ponding depth and ponding duration. Additionally, the site-specific models will document the flood protection levels of service within the basin for which the project will be designed. Output of the site-specific models may be flooding depth, peak stage and discreet storm events including 1:2, 1:5, 1:10, 1:25 and 1:100 year storms, and the standard project flood (SPF).

If analysis of the output of the tentatively selected plan indicates no reduction in level of service for flood protection existing as of December 2000 within the identified basins or site specific areas has occurred, the PIR should: 1) contain all the necessary documentation supporting the conclusion; and 2) affirm that December 2000 levels of flood protection have not been diminished.

If analysis of the tentatively selected plan determines that the levels of service of flood protection existing as of December 2000 have been diminished within the identified basins or site specific areas then the tentatively selected plan should be revised to retain the levels of service of flood protection.

D. Protection of Existing Legal Users During Development of the PIR Tentatively Selected Plan

One of the criteria for State approval of CERP projects prior to transmittal of a PIR to Congress for approval and the appropriation of State funds for construction, requires the South Florida Water Management District to "…provide reasonable assurances that the quantity of water available to existing legal users shall not be diminished by implementation of project components so as to adversely impact existing legal users…" Section 373.1501(5)(d), F.S. Therefore, the PIR must include an analysis of the potential impact of a proposed project on the

quantity and quality of water available to existing legal users. In addition, State law requires protection of existing legal users when establishing water reservations for the environment to the extent that such uses are not contrary to the public interest; therefore, the tentatively selected plan must demonstrate protection of the existing legal users prior to reserving the water made available by the proposed project for the protection of fish and wildlife.

These requirements will be met by comparing the water supply performance measures of the draft PIR tentatively selected plan with the water supply performance measures quantified in the Existing Condition PIR Baseline for existing legal user protection (Section VI. C). Before making this comparison, the PIR tentatively selected plan must first be normalized to the demands and land use of the Existing Condition PIR Baseline. Therefore, the PIR tentatively selected plan's structural and operational features along with the other previously approved CERP projects will be inserted into the Existing Condition PIR Baseline that contains the existing legal users and existing levels of flood protection for comparison. This comparison will be done for each water user basin identified in the Section V. C. As mentioned previously, this analysis may be performed using the SFWMM if the PIR tentatively selected plan is located within its boundary or by more site-specific models if the PIR tentatively selected plan is outside its boundary or by a combination of the two.

Water quality considerations should also be predicted for the tentatively selected plan to determine if the water provided by the tentatively selected plan protects existing legal users and is acceptable for the intended use as described in Section VII. B.

If analysis of the performance measures of the PIR tentatively selected plan determines that the quantity and quality of water available to existing legal users has not been diminished so as to adversely impact existing legal users, the PIR should: 1) contain all the necessary documentation supporting the conclusion; and 2) affirm that all existing legal users are not adversely impacted consistent with State law.

E. Protection of Levels of Service for Flood Protection Through Time During Development of the PIR Tentatively Selected Plan

The State of Florida provided assurances for flood protection in Section 373.1501(5)(a) and (d) which requires the SFWMD, as the C&SF local sponsor to:

> (a) Analyze and evaluate all needs to be met in a comprehensive manner and consider all applicable water resource issues, including water supply, water quality, flood protection, threatened and endangered species, and other natural system and habitat needs.
>
> (d) Consistent with this chapter, the purposes for the Restudy provided in the Water Resources Development Act of 1996, and other applicable Federal law, provide reasonable assurances that…. "existing levels of service for flood protection will not be diminished outside the geographic area of the project component".

The levels of flood protection at the time the PIR is initiated will be documented through development of the Existing Condition PIR Baseline as discussed in Section VI. Potential

impacts to the levels of service for flood protection will be determined by normalizing the output from the tentatively selected plan. This normalization will be accomplished by inserting the tentatively selected plan plus all the previously approved CERP projects into the Existing Condition PIR Baseline. Since the SFWMM consists of a 2-mile by 2-mile grid system, only a general indication of flood protection can be determined through regional analysis. For that reason, site specific integrated ground and surface water models may also be developed for each PIR for specific analysis of levels of service for flood protection.

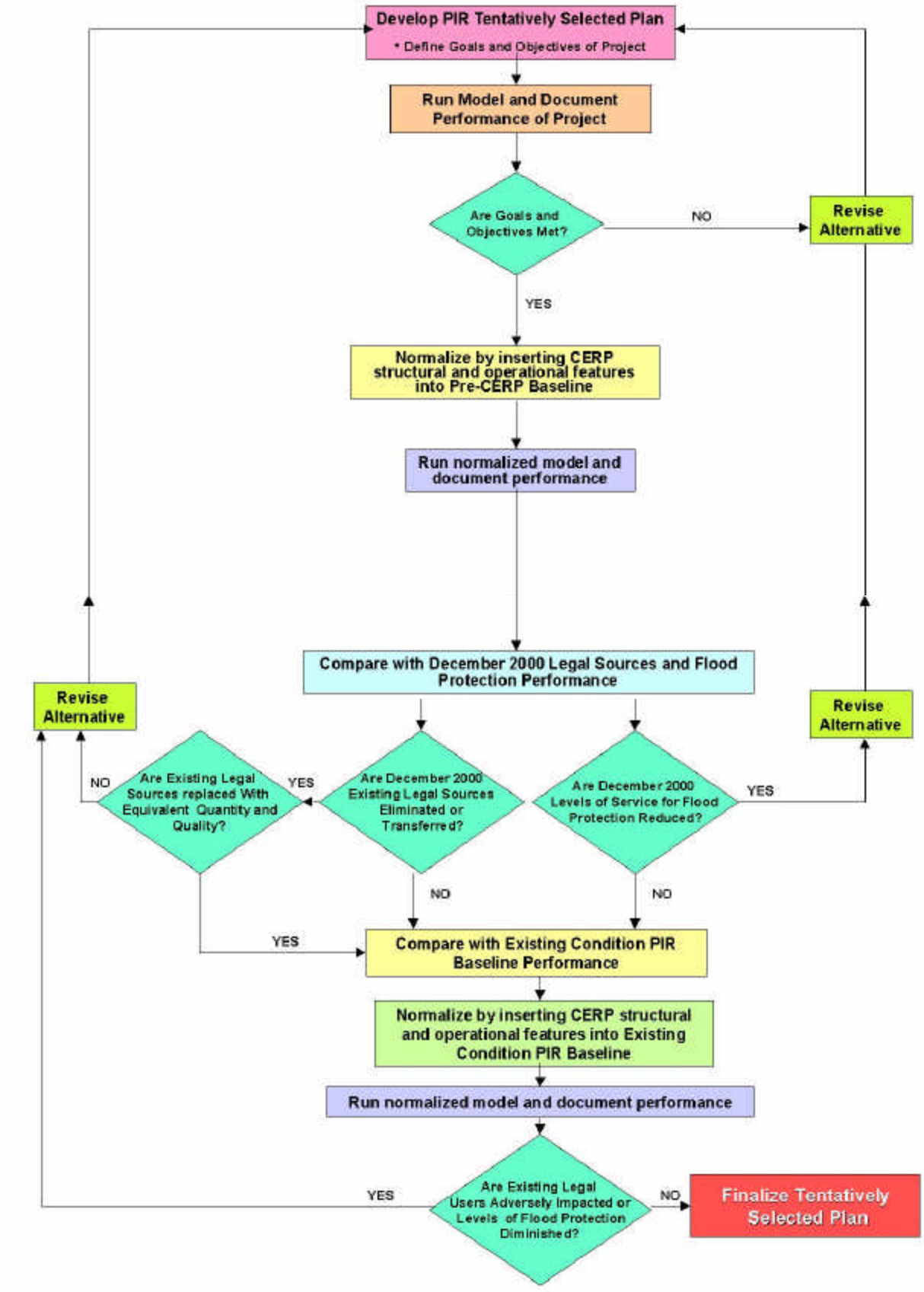
The same general water user basin areas as outlined in Section V will be used by the SFWMM to evaluate the potential for flooding impacts caused by a proposed project. Site specific models utilized for evaluation within the geographic influence of the proposed project will also need to be scrutinized for potential flooding depending on the effects of the proposed project.

Outputs from the regional model are proposed to be similar to those used in the development of the CERP and the *Lower East Coast Regional Water Supply Plan*, such as ponding depth and ponding duration. Additionally, the site-specific models will document the flood protection levels of service within the basin for which the project will be designed. Output of the site-specific models may be flooding depth, peak stage and discreet storm events including 1:2, 1:5, 1:10, 1:25 and 1:100 year storms, and standard project flood (SPF).

If analysis of the output of the tentatively selected plan determines no reduction in the existing level of service for flood protection within the identified basins or site specific areas has occurred, the PIR should: 1) contain all the necessary documentation supporting the conclusion; and 2) affirm that levels of flood protection have not been diminished.

If analysis of the tentatively selected plan determines that the levels of service of flood protection have been diminished within the identified basins or site specific areas then the tentatively selected plan should be revised to retain the levels of service of flood protection. However, no protection should be required for incidental flood protection benefits not specified in the project design.

Protection of Existing Legal Sources and Levels of Flood Protection as December 2000; and Protection of Existing Legal Users and Existing Levels of Service of Flood Protection Through Time by Development of the PIR Tentatively Selected Plan



VIII. Quantification of Additional Water Made Available for the Natural System and Other Uses through the Development of the Draft PIR

A. Background

WRDA 2000 Section 601(h)(4)(A) requires that a PIR identify the appropriate quantity, timing, and distribution of water dedicated and managed for the natural system, and identify the amount of water to be reserved or allocated for the natural system. State law through Section 373.470(3), F.S. requires that each PIR identify the increase in water supplies resulting from a project component.

The natural system and human water supply benefits of a CERP project should be reflective of the expected performance of a facility or a group of facilities. These benefits are typically judged by the ability of a facility to improve, or meet a set of agreed upon performance measures consistent with restoration, water supply and flood protection goals.

Since the projects that comprise CERP are designed to work together to achieve the system-wide goals and purposes of CERP, in most cases, the quantification of benefits should be done on a system-wide basis in addition to a project by project basis. For example, projects such as the Indian River Lagoon, Lake Okeechobee Watershed, and the EAA Storage Reservoirs, have significant effects outside of their location. It is important that the identification of project benefits be made for the entire system, and not just for the project itself, or the area where it is located. Additionally, for some projects, such as the seepage management projects, the amount of water made available by the project may not be readily determined unless a system-wide analysis is done. Lastly, some projects, such as Decompartmentalization of WCA 3, may not make additional water available.

The system-wide approach requires using system-wide hydrologic tools, such as the SFWMM, also avoids the potential for a double accounting of the additional water made available through time that may occur if separate localized models are used. The system-wide approach will also make it easier to assess, or modify, the amount of water needed for the natural system based on the results of the adaptive management program. There are some exceptions to the system-wide approach. For those projects that are not physically interconnected to the features of the C&SF system (e.g., Southern Golden Gate Estates Project), identification of water to be made available for the natural system should be done on a project-level basis.

The additional water made available by a proposed project will be estimated by a series of performance measures reflecting the natural system and water supply benefits. These benefits will be documented over the full range of dry, average and wet conditions based on historical rainfall trends. The increase in water made available by a proposed project will be quantified by comparing the tentatively selected plan, with and without the proposed project, against the Existing Condition PIR Baseline and documenting the difference in the PIR.

B. Proposed Performance Measures

The proposed performance measures for quantifying the additional water made available for the natural system and other uses are shown below:

- **Kissimmee River Basin –** Volume delivered which falls within flow restoration targets
- **LOSA Agricultural Areas –** demands not met, volumes delivered from Lake Okeechobee
- **Urban Service Areas –** Water shortage frequencies, volumes delivered from respective WCAs and Lake Okeechobee
- **Estuaries –** Volume delivered which falls within desired salinity envelopes (Loxahatchee, Biscayne Bay and Florida Bay need additional work to define)
- **WCAs –** number and spatial location of NSM hydropattern matches, volume delivered from Lake Okeechobee, and volume delivered from EAA which is beneficial to fish and wildlife
- **ENP –** number and spatial location of NSM hydropattern matches, total flow across Tamiami Trail, deliveries from Lake Okeechobee
- **Seminole Tribe** – demands not met, entitlement met, deliveries from Lake Okeechobee
- **Miccosukee Tribe** - number and spatial location of NSM hydropattern matches for natural system areas

IX. Protection of Additional Water Made Available by CERP for Natural Systems through State Water Reservations and Other Uses through State Law

A. Background

This section discusses the process for protecting the water made available by CERP for the natural system and other uses. WRDA 2000 requires that water for the natural system be identified for each project in the PIR process and that a reservation or allocation of water made available for natural system be executed prior to the Project Cooperation Agreement (PCA) being signed. Furthermore, Section 373.470(3) F.S., requires that each PIR identify the increase in water supplies resulting from a project component, and that the additional water supplies be allocated or reserved by the SFWMD under Chapter 373, F.S. authority.

B. Development of State Water Reservation

For natural systems, the reservation process will provide assurances the water made available by a CERP project that is directed to the natural system is set aside from allocation and that existing legal users are protected. Furthermore, the reservation should specify that the reserved water is not required to be delivered until a final operating manual is developed and approved by the South Florida Water Management District and U.S. Army Corps of Engineers, and the facility is fully tested and operational.

Since the PIR is a preliminary design document that is followed by detailed designs, construction, and final operating manuals, there is a high probability that the ultimate

performance of the project may change. This change may affect the amount of water initially reserved for the natural system. The final performance of the project may also affect the amount of water available for consumptive users as estimated by the PIR. Likewise, RECOVER may identify, through time, additional facilities or operational changes that will fine tune the natural system benefits of a particular project which may require revisions to the existing water reservation. Therefore, the reservation should be conditioned upon reevaluating the performance of the project once constructed and operational.

Based on this information in the PIR, the reservation should include the following as an example:

1) **The original source of reserved water** (e.g. IRL storage reservoir);
2) **The potential conveyance routes of the reserved water** (e.g. IRL storage reservoir to C-44 connector canal, to C-44, to C-44 STA, to Lake Okeechobee surface water, to Floridan Aquifer via ASR, to Lake Okeechobee surface water via ASR, to Miami canal via S-3, to Water Conservation Area 3 via S-8);
3) **The primary fish and wildlife benefit of the reserved water** (e.g. reduced inflow to Indian River Lagoon and WCA 3 hydropattern improvement);
4) **Whether the proposed CERP project eliminates or transfers existing legal sources or diminishes levels of service of flood protection existing as of December 2000, and the identity of the new source and when the new source will become available** (e.g. the St. Lucie Agricultural Area current supply source is C-23 Canal with an allocation of xx acre-feet; IRL reservoir supplies xx acre-feet under one in ten year conditions; shift agricultural users water source from C-23 to IRL reservoir once project is completed, and tested and operational);
5) **Whether the proposed CERP project increases the water supply to other uses, the source of the additional water and when the quantity will be available;**
6) **Inclusion of all relevant performance measures used in the quantification of additional water made available for the natural system as discussed is Section VI.**

C. Relationship of Quantification of Water to be Reserved and Operating Manuals

System-wide operations may also be modified as a new project is designed and implemented. During the design of the project, operations of the regional system should be included in the analysis and necessary changes should be documented. After the project is constructed and operational, and concurrent with the development of the final operating manual, revisions to the existing system-wide operating manual should be made to reflect the addition of the new CERP project in accordance with approved protocols and procedures.

It should be noted that the quantification and accounting of water needed to be reserved, as reflected in the PIR design, could vary from the actual project performance after project construction and during the operation phase. During the PIR development process, evaluations are done on a predictive basis, based on assumptions that the projects recommended in all previously authorized PIRs are in place. This allows comparison of the effect of a project combined with the other authorized CERP projects to the conditions prior to CERP (i.e., Pre-CERP Baseline condition) and the Existing Condition PIR Baseline. Operations for a project

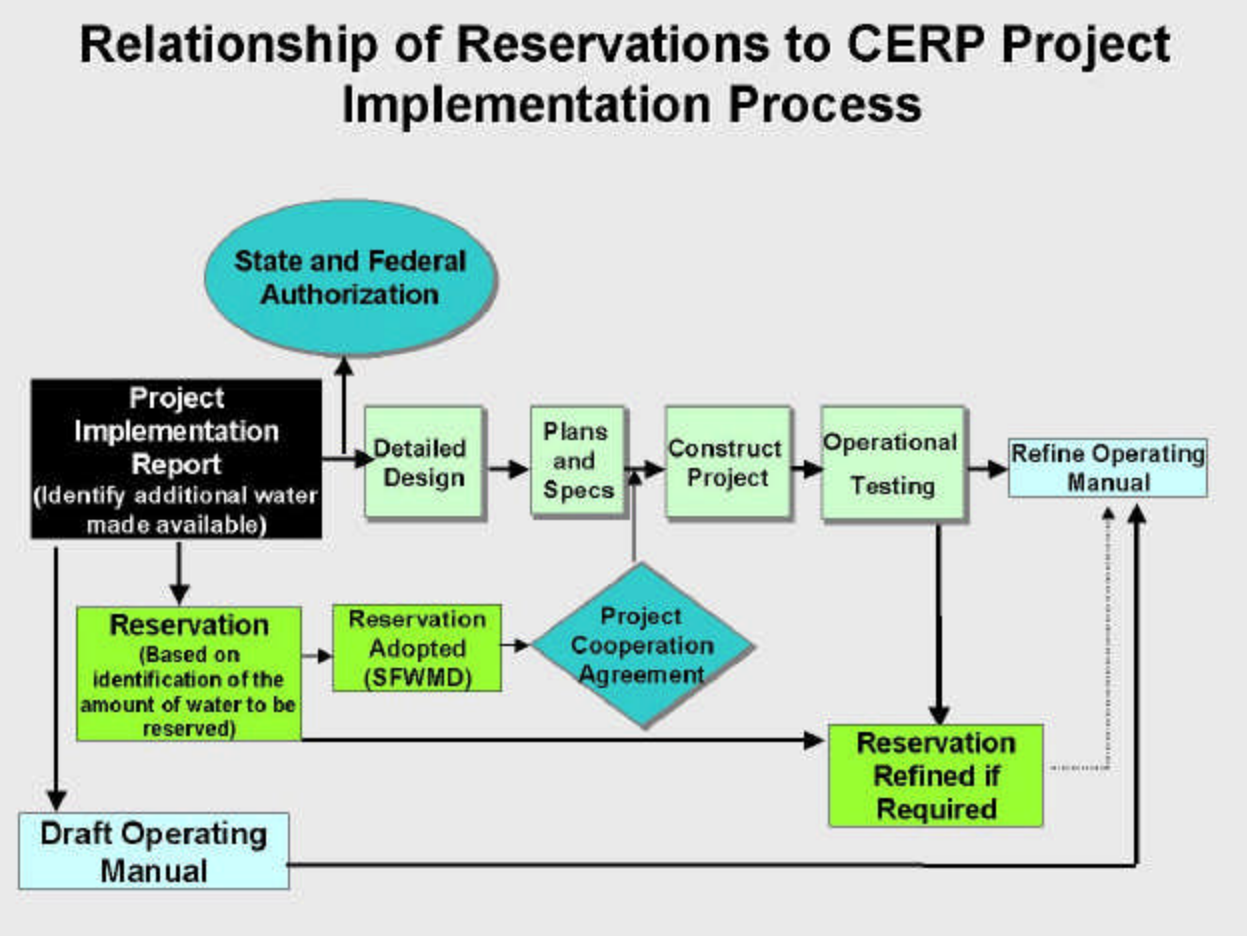
will be refined when construction and testing are complete to optimize the operation of the C&SF project, along with those projects in place and operational.

The optimization of the tentatively selected plan will serve as the basis for not only quantifying the water to be reserved, it will also be the model simulation from which the draft project operating manual will be derived. This draft operating manual will be a part of the PIR, and will be consistent with the quantification of water to be reserved.

It is anticipated that the draft operating manual will be refined through the detailed design and construction phases of project implementation while continuing to meet the operation goals as described in the PIR. Once a project is constructed and the operational/testing phase is nearing completion, the operating manual will be revised and finalized to reflect the operations of the project that has been completed. While the operations of the completed project must reflect the original intent of the PIR description as closely as possible, it must be recognized that the relationship of the completed project with the operations of the rest of the C&SF project, including other CERP projects, that have been completed may differ from the draft project operating manual in the PIR. Consequently, it may be necessary to revise the reservation to reflect the constructed project and the associated operations. This will occur in at least two circumstances: 1) when the projects that are assumed to be built during PIR analysis differs from what is actually constructed and 2) when a project performance differs from what was envisioned in the PIR.

Timing and Relationship of Project Development, Quantification of Water and Operating Manuals

Project Development Process	Stage of Quantification of Water	Stage of Operating Manual Development
PIR	Identify Quantity to be reserved	Draft Operating Manual
Detailed Design	Refine Quantity to be reserved	Update Draft Operating Manual
Plans and Specifications	Initial Reservation (adopted)	
PCA	Reservation verified	Construction Phase Operating Manual
Construction		Operational Testing Phase Operating Manual
Operational Testing		
Post Operational Testing	Refine Reservation (if required)	Final Operating Manual
Fully Operational		



X. Additional Water Supply and Resource Protection Strategies Proposed by the State to Complement CERP Implementation

A. Background

This section discusses additional water supply and resource protection strategies proposed by the State to complement the implementation of CERP. These additional strategies are primarily a result of the recommendations related to the *Lower East Coast Regional Water Supply Plan (LECRWSP)* and include: 1) quantification of regional water availability for water supply service areas and adoption of consumptive use permitting rules that define regional water availability; (2) establishment of initial reservations of water for the protection of fish and wildlife; 3) adoption and implementation of minimum flows and levels (MFL) rules which will limit future consumptive use withdrawals from priority water bodies in recovery consistent with the *LECRWSP* assumptions, and 4) adoption and implementation of a permit duration rule that identifies the reasonable assurances necessary to obtain a 20 year permit, and lesser duration permits consistent with availability of water for allocation and timeframes for CERP and regional water supply plan implementation. A figure showing the relationship of these State water resource protection strategies is included at the end of this section.

B. Quantification of Regional Water Availability for Water Supply Service Areas

The concept of Regional Water Availability (RWA) was first introduced in, and made a recommendation of, the *Lower East Coast Regional Water Supply Plan*, which was accepted by the Governing Board in May 2000. The purpose of RWA is to protect the Everglades ecosystem from harm and provide quantification of water for allocation to consumptive users by providing an accounting of the available regional water to the Lower East Coast supply service areas. The RWA will also include water necessary to meet non-consumptive uses within the Lower East Coast Plan region not associated with reservations for protection of fish and wildlife, particularly those that require water for protecting water supply sources such as prevention of saltwater intrusion. Identification of regional water availability is necessary in order to protect the water resources of the region while allowing for an optimization or more efficient use of the water for consumptive uses that is currently available. Since the major environmental benefits of CERP projects are not likely to be realized for five to ten years, it is necessary to identify the rate at which both consumptive uses and environmental enhancement will increase through time as provided for in the *LECRWSP* and as anticipated under CERP.

Using the SFWMM and/or an appropriate local level models, regional water availability will initially be identified from the existing conditions at the time of rule development (expected to be in 2005). A one in ten drought year will be statistically selected for each water supply service area from the period of historical rainfall record for the SFWMM, or appropriate rainfall station period of record. This is representative of consumptive use permitting criteria, consistent with the Section 373.0361, F.S. one in ten drought year level of certainty goal.

As certain CERP projects are constructed and successfully operated, and concurrent with the latest update of the *LECRWSP*, the RWA will be updated to identify the additional water made available for consumptive and other uses by the projects. These updates are contemplated to be performed at a minimum of every 5 years, or as CERP projects are constructed, and must be consistent with any reservations which are established for the natural system**.** Likewise, the RWA will be updated to include other water use basins that may not currently be connected to the regional system (e.g. northern Palm Beach County area through the implementation of the North Palm Beach County CERP project).

Surface water deliveries and ground water flows from the regional system to the water supply service areas during a one in ten drought condition should be documented using the SFWMM and/or other appropriate local level models. Loxahatchee National Wildlife Refuge (i.e., WCA 1) deliveries should be documented to Service Area 1, Water Conservation Area 2A deliveries should be documented to Service Area 2 and Water Conservation Area 3B deliveries should be documented to Service Area 3. Surface water deliveries from Lake Okeechobee should be documented to the Caloosahatchee Basin, Lake Rim Area, St. Lucie Basin and the Everglades Agricultural Basin.

Not only will the water available for future consumptive uses be identified as part of the CERP process, but also potential shortfalls in future demands will be identified and planned for as part of the five year updates of the *Lower East Coast Regional Water Supply Plan*. Changes in the projected water availability based on actual project performance, construction schedule

adjustments, unanticipated changes in consumptive use demands, funding, and institutional issues will require an ongoing strategy of periodic regional system-wide review to insure that both future water use demands and environmental goals are met. If a shortfall is projected for future consumptive uses, then periodic updates of the regional water supply plans under State law will identify the necessity of additional water resource development projects or water supply development projects, including conservation measures, to make up for the shortfall.

C. Implementation of Regional Water Availability through Consumptive Use Permitting Rules

As each CERP project is constructed and operational, regional water availability also will change requiring concurrent revisions to the regional water availability rule. These revisions will not only reflect the changes in the system-wide operations necessary to effectively implement each constructed project, but will also form the basis for potential increases in available supply for allocation to human uses.

In order to assure that the volumes of regional water available for consumptive uses are not over-allocated or likewise redirected to environmental restoration, an accounting procedure needs to be established in SFWMD rules and implemented through the permit application review process. In concept, this process would include the following steps:

1. The amount of regional water (surface water and groundwater seepage, as applicable) available for both consumptive and non-consumptive uses within each service area would be quantified as described above. These volumes would be codified in SFWMD consumptive use permit rules based on one in ten drought hydrologic conditions, with considerations for system operations (such as canal operational stages), CUP demands and land use within the service area reflective of the modeling assumptions from which the rules are adopted. Changes to the regional water availability volumes, as a result of deployment of regional water resource development projects or as a result of changes in the quantification methodology would require a formal change to the rule.

2. During the review of each individual water use permit within the service area, the applicant will be required to quantify the portion of the requested allocation that is regional water verses other sources such as local groundwater storage. This evaluation would be needed for projects proposing uses that: a) withdraw surface water from primary or secondary canals that are primarily maintained by regional water deliveries, b) withdraw groundwater beneath primary or secondary canals that are maintained by regional water deliveries to a degree that cause seepage of regional water into the well(s), or c) withdraw groundwater at a location and of a magnitude to cause increased seepage of regional water beneath the levees along the Lower East Coast. The analytic methods used by the applicant to quantify the amount of regional water proposed for use by the project must be consistent with the methods and model used to define the total regional water available to the service area in the rule. Consideration of the use of an alternative source to the degree that they offset proposed demands on the regional system will also be evaluated and encouraged, such as through longer permit duration.

3. A ledger will be kept that documents the portions of regional water available to a service area that has been allocated to date. The amount of regional water proposed to be used by the permit applicant will be added to the existing uses in the ledger and compared with the total amount of regional water available to the service area defined by rule. The object is to not exceed the volume in the rule.

4. It is recognized that the total amount of regional water defined in the rule must meet both consumptive and non-consumptive uses in the service area. Non-consumptives uses of regional water will be protected by the permit applicant meeting the remaining conditions of permit issuance (such as salt-water intrusion prevention, isolated wetland protection, water conservation requirements etc.). In addition, the ledger volumes will be checked regularly (prior to the monthly Governing Board meetings or quarterly) using the same model and assumptions that were used to generate the original service area volume in the rule to see that the total of consumptive and non-consumptive demands for regional water have not been exceeded.

It should be recognized that this concept is subject to significant refinement or revision during the actual rule development/rule making process. The RWA rule should also define what actions are to be taken in the event that demands of a basin equal or exceeds the volume of regional water available to the basin by rule.

D. Establishing an Initial Reservation of Water for the Natural System

The *Lower East Coast Regional Water Supply Plan* recommended establishment of an initial reservation of water for the Everglades Protection Area. The intent of this initial reservation is to reserve from allocation those natural system deliveries that are currently available to and beneficial for the protection of fish and wildlife. Initial reservations are envisioned for the Water Conservation Areas and Everglades National Park, for which rainfall driven schedules are being developed that improve the timing, flow and distribution of water to enhance these areas. Additionally, initial reservations are anticipated for all the major estuaries to reflect flows currently available which fall within minimum and maximum salinity envelopes that benefit the protection of fish and wildlife. Deliveries that fall outside of these envelopes will not be reserved from allocation. The initial reservation will be consistent with the regional water availability rule.

The Natural System Model (NSM) hydropattern estimates and CERP environmental performance measures will be used as the basis for the modeling analysis through the SFWMM with considerations for the existing storage, conveyance, structures, existing legal users and other constraints of the current system. Once the modeling scenarios confirm that the environmental performance of the modeling output is acceptable (i.e., the best that can be achieved with the existing C&SF system), the environmental delivery assumptions will be converted to operational rules.
The performance of the rainfall driven schedules and salinity envelopes will then be documented through volume probability curves and NSM hydropattern matches for the period of historical rainfall. The portion of the rainfall driven deliveries that are projected to protect fish and

wildlife will be reserved from allocation. Reservations for future CERP projects (see Section IX) will then build on this initial reservation.

E. Minimum Flows and Levels Rule

The SFWMD is responsible for the implementation of statutory provisions in Section 373.042, F.S., requiring establishment Minimum Flows and Levels (MFLs) for watercourses and aquifers. Generally stated, the MFLs for a given watercourse or aquifer are the limit at which further withdrawals would be significantly harmful to the water resources of the area. Section 373.042, F.S. Significant harm is defined by SFWMD rule to be the temporary loss of water resource functions that takes more then two years to recover. Rule 40E-8.021(24), F.A.C. Certain exclusions and considerations for establishing MFLs, including defining "significant harm" for a specific water body, are contained in Section 373.0421, F.S. Recovery and prevention strategies must also be developed if there are existing or projected shortfalls in meeting the MFL, as provided by Section 373.0421, F.S.

Minimum flow and level standards for specific water bodies and aquifers within the SFWMD are contained in Chapter 40E-8, F.A.C., which also includes recovery and prevention strategies for each MFL. At this time MFLs have been established for the following:

- Lake Okeechobee
- Everglades (Water Conservation Areas, Everglades National Park, and Rotenberger and Holeyland Wildlife Management Areas)
- Northern Biscayne Aquifer within the Lower East Coast
- Lower West Coast confined aquifers
- Caloosahatchee Estuary
- Northwest Fork of the Loxahatchee River
- St. Lucie River.

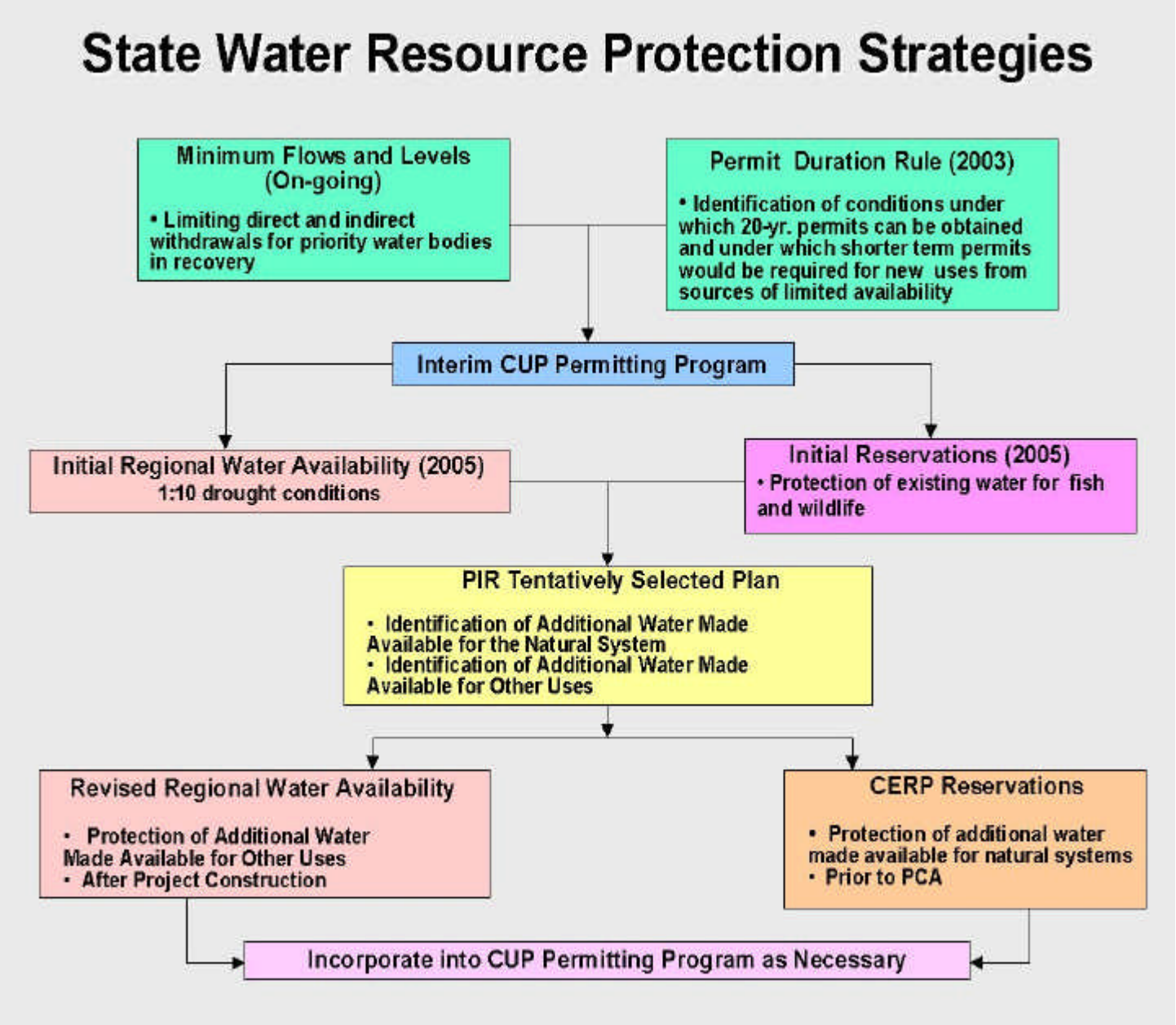
The SFWMD is also proceeding with efforts to develop MFLs for the Biscayne Bay and the Southern Biscayne aquifer by the end of 2004 and the Florida Bay by the end of 2006.

In addition to the standards and recovery and prevention strategies in Chapter 40E-8, specific consumptive use permitting criteria for MFLs are adopted in Chapter 40E-2, F.A.C. and water shortage criteria for MFLs are adopted in Chapters 40E-21 and 40E-22, F.A.C. Primarily these criteria prohibit increased allocations that are a direct withdrawal from MFL priority water bodies in recovery, and limit increased allocations which are an indirect withdrawal to those which do not affect the performance of the MFL.

F. CUP Permit Duration Rule

Pursuant to Section 373.236, F.S., the water management districts are required to issue 20 year consumptive use permits if there is sufficient data to provide reasonable assurance that the conditions for permit issuance will be met for the duration. If sufficient data does not exist to provide the necessary reasonable assurances, permit duration must reflect the period for which such reasonable assurances can be provided. To this end the SFWMD has proposed a permit

duration rule identifying conditions under which 20-year permits can be obtained, and under which shorter-term permits would be appropriate based on limited availability of certain water supply sources. This rule is projected to be adopted in 2003.



APPENDIX

Appendix A. Definitions

Baseline condition: A baseline condition is a particular "snapshot" of the water management system in time (e.g. December, 2000). Defining a baseline condition generally includes a description of the water management components that may be built and operational for that point in time, as well as the corresponding operating criteria, land use/land cover and natural and human demands on the system. The performance of the baseline scenario is determined by simulating a long period of historical climatic data (e.g. 36 years covering 1965-2000) and then evaluating the performance measures for a variety of hydrologic conditions.

Existing legal source: For purposes of implementing the "Savings Clause" in Section 601(h)(5)(A) of WRDA 2000, "existing legal sources" are the sources of water available to a water user basin within the South Florida ecosystem from all locations (including seepage, surface water, and groundwater) used as a water supply, including the water necessary for protection of the source of supply, as of December 11, 2000, consistent with Federal and State law, for:

(1) an agricultural or urban water supply;
(2) allocation or entitlement to the Seminole Tribe of Florida under section 7 of the Seminole Indian Land Claims Settlement Act of 1987 (25 U.S.C. 1772e);
(3) the Miccosukee Tribe of Indians of Florida;
(4) water supply for Everglades National Park; or
(5) water supply for fish and wildlife.

Hydrologic conditions: Hydrologic conditions (e.g. Wet, Average, and Dry) will be based on rainfall, flow, or water level depending on the particular application. The quantities defining the hydrologic regimes will be based on the analysis of a time series of rainfall, flow, or water levels for the entire period of simulation (36-year period covering 1965-2000 or a subset) for a particular baseline/scenario.

Natural system: All land and water managed by the Federal government or the State within the South Florida ecosystem and includes water conservation areas; sovereign submerged land; Everglades National Park; Biscayne National Park; Big Cypress National Preserve; other Federal or State (including a political subdivision of a State) land that is designed and managed for conservation purposes; and any tribal land that is designated and managed for conservation purposes, as approved by the tribe.

Performance measure: An indicator and its target.

Pre-CERP baseline: A model run intended to be used as a tool to help quantify existing legal sources under Section 601(h)(5), including the conditions in the south Florida ecosystem that existed on December 11, 2000, the date of enactment of section 601 of the Water Resources Development Act of 2000 (114 Stat. 2680), through modeling and includes such things as land use, population, water demand, and operations of the Central and Southern Florida Project. The assumptions of the Pre-CERP Baseline will not change; however, the system performance, as estimated by the Pre-CERP Baseline, may change as the models are revised or additional data is incorporated into the models.

Project Cooperation Agreement (PCA): The legal agreement between the Department of the Army and a non-Federal sponsor that is executed prior to project construction. The Project Cooperation Agreement describes the financial, legal, and other responsibilities for construction, operation, maintenance, repair, rehabilitation, and replacement of a project.

Project Implementation Report (PIR): The report prepared by the Corps of Engineers and the non-Federal sponsor pursuant to section 601(h)(4)(A) of the Water Resources Development Act of 2000 (114 Stat. 2689) and described in Section 10.3 of the "Final Integrated Feasibility Report and Programmatic Environmental Impact Statement", dated April 1, 1999. The Project Implementation Report is a new type of document containing additional project formulation and evaluation as well as more detailed engineering and design. The Project Implementation Report bridges the gap between the conceptual level of detail contained in the "Final Integrated Feasibility Report and Programmatic Environmental Impact Statement" and the detailed design necessary to proceed to construction.

Project operating manual: The manual that describes the operating criteria for a project or a group of projects of the Plan. The Project Operating Manual is considered a supplement to the System Operating Manual and presents more detailed information on the operation of a specific project or group of projects.

Project performance: An agreed upon set of performance measures for which the proposed project (PIR) meets or exceeds the performance indicated in the CERP.

Regional Water Availability: An analysis of the net inflows and outflows of the C&SF Project system under a one in ten drought year condition. The analysis identifies the quantity, sources, and destination of surface and groundwater supplies. It will be principally used to determine the extent to which surface and groundwater resources may be available through time for allocation under the State consumptive use permitting program.

Reservation of water for the natural system: The actions taken by the South Florida Water Management District, the Florida Department of Environmental Protection, or any other State agency or water management district which may be authorized by Florida law, pursuant to the provisions of Section 373.223, F.S., or other applicable State law, to legally reserve water from allocation for consumptive use for the protection of fish and wildlife.

Selected Plan: Upon completing the technical analyses necessary to tentatively select a plan, the formulation and evaluation of alternative plans is presented to the public, other government agencies and decision-makers. The culmination of the technical analyses and the review of the tentatively selected plan result in the identification of the "selected plan".

System operating manual: The system-wide Operating Manual for the Plan that provides an integrated framework for operating all of the projects of the Plan.

System-wide reservation account: The system-wide reservation account represents a system-wide accounting of all water delivered to meet environmental targets for a particular baseline/scenario. It is an aggregation of individual project reservation amounts with a careful

attention to avoid counting the same water more than once. Such an account will be derived from the regional-scale modeling results including detailed water budgets, and individual project reservation accounts.

Target: A measure of change by an indicator that is expected or desired during and following the implementation of the Comprehensive Everglades Restoration Plan.

Tentatively selected plan: A single alternative plan selected for recommendation from among all those that have been considered. The selected plan must be shown to be preferable to taking no action and preferable to any of the other alternatives considered during the PIR process. The word "tentatively" is used to differentiate the status of the selected plan during different phases of PIR development.

Volume probability curve: Volume probability curve plots estimate quantities of water produced by a particular facility (usually expressed as ac-ft or million/billion gallons) as a function of the percentage of time the quantity is equaled or exceeded. It describes, in a graphical form, the water quantities that may be expected from a particular project or a group of projects for a range of hydrologic conditions.

Water budget: A complete accounting of the inflow to, outflow from, and storage system-wide in a new project facility or a group of new projects.

Water made available: The water generated from the implementation of the components of the Plan. These components include storage reservoirs, aquifer storage and recovery facilities, storm water treatment areas, water reuse facilities, and seepage management.

Appendix B. Water Resources Development Act of 2000-Assurance Provisions

Section 601(h)- ASSURANCE OF PROJECT BENEFITS-

(1) IN GENERAL- The overarching objective of the Plan is the restoration, preservation, and protection of the South Florida Ecosystem while providing for other water-related needs of the region, including water supply and flood protection. The Plan shall be implemented to ensure the protection of water quality in, the reduction of the loss of fresh water from, the improvement of the environment of the South Florida Ecosystem and to achieve and maintain the benefits to the natural system and human environment described in the Plan, and required pursuant to this section, for as long as the project is authorized.

(2) AGREEMENT-

(A) IN GENERAL- In order to ensure that water generated by the Plan will be made available for the restoration of the natural system, no appropriations, except for any pilot project described in subsection (b)(2)(B), shall be made for the construction of a project contained in the Plan until the President and the Governor enter into a binding agreement under which the State shall ensure, by regulation or other appropriate means, that water made available by each project in the Plan shall not be permitted for a consumptive use or otherwise made unavailable by the State until such time as sufficient reservations of water for the restoration of the natural system are made under State law in accordance with the project implementation report for that project and consistent with the Plan.

(B) ENFORCEMENT-

(i) IN GENERAL- Any person or entity that is aggrieved by a failure of the United States or any other Federal Government instrumentality or agency, or the Governor or any other officer of a State instrumentality or agency, to comply with any provision of the agreement entered into under subparagraph (A) may bring a civil action in United States district court for an injunction directing the United States or any other Federal Government instrumentality or agency or the Governor or any other officer of a State instrumentality or agency, as the case may be, to comply with the agreement.

(ii) LIMITATIONS ON COMMENCEMENT OF CIVIL ACTION- No civil action may be commenced under clause (i)--

(I) before the date that is 60 days after the Secretary and the Governor receive written notice of a failure to comply with the agreement; or

(II) if the United States has commenced and is diligently prosecuting an action in a court of the United States or a State to redress a failure to comply with the agreement.

(C) TRUST RESPONSIBILITIES- In carrying out his responsibilities under this subsection with respect to the restoration of the South Florida ecosystem, the Secretary of the Interior shall fulfill his obligations to the Indian tribes in South Florida under the Indian trust doctrine as well as other applicable legal obligations.

(3) PROGRAMMATIC REGULATIONS-

(A) ISSUANCE- Not later than 2 years after the date of enactment of this Act, the Secretary shall, after notice and opportunity for public comment, with the concurrence of the Governor and the Secretary of the Interior, and in consultation with the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, the Administrator of the Environmental Protection Agency, the Secretary of Commerce, and other Federal, State, and local agencies, promulgate programmatic regulations to ensure that the goals and purposes of the Plan are achieved.

(B) CONCURRENCY STATEMENT- The Secretary of the Interior and the Governor shall, not later than 180 days from the end of the public comment period on proposed programmatic regulations, provide the Secretary with a written Statement of concurrence or nonconcurrence. A failure to provide a written Statement of concurrence or nonconcurrence within such time frame will be deemed as meeting the concurrency requirements of subparagraph (A)(i). A copy of any concurrency or nonconcurrency Statements shall be made a part of the administrative record and referenced in the final programmatic regulations. Any nonconcurrency Statement shall specifically detail the reason or reasons for the nonconcurrence.

(C) CONTENT OF REGULATIONS-

(i) IN GENERAL- Programmatic regulations promulgated under this paragraph shall establish a process--

(I) for the development of project implementation reports, project cooperation agreements, and operating manuals that ensure that the goals and objectives of the Plan are achieved;

(II) to ensure that new information resulting from changed or unforeseen circumstances, new scientific or technical information or information that is developed through the principles of adaptive management contained in the Plan, or future authorized changes to the Plan are integrated into the implementation of the Plan; and

(III) to ensure the protection of the natural system consistent with the goals and purposes of the Plan, including the establishment of interim goals to provide a means by which the restoration success of the Plan may be evaluated throughout the implementation process.

(ii) LIMITATION ON APPLICABILITY OF PROGRAMMATIC REGULATIONS- Programmatic regulations promulgated under this paragraph shall expressly prohibit the requirement for concurrence by the Secretary of the Interior or the Governor on project implementation reports, project cooperation agreements, operating manuals for individual projects undertaken in the Plan, and any other documents relating to the

development, implementation, and management of individual features of the Plan, unless such concurrence is provided for in other Federal or State laws.

(D) SCHEDULE AND TRANSITION RULE-

(i) IN GENERAL- All project implementation reports approved before the date of promulgation of the programmatic regulations shall be consistent with the Plan.

(ii) PREAMBLE- The preamble of the programmatic regulations shall include a Statement concerning the consistency with the programmatic regulations of any project implementation reports that were approved before the date of promulgation of the regulations.

(E) REVIEW OF PROGRAMMATIC REGULATIONS- Whenever necessary to attain Plan goals and purposes, but not less often than every 5 years, the Secretary, in accordance with subparagraph (A), shall review the programmatic regulations promulgated under this paragraph.

(4) PROJECT-SPECIFIC ASSURANCES-

(A) PROJECT IMPLEMENTATION REPORTS-

(i) IN GENERAL- The Secretary and the non-Federal sponsor shall develop project implementation reports in accordance with section 10.3.1 of the Plan.

(ii) COORDINATION- In developing a project implementation report, the Secretary and the non-Federal sponsor shall coordinate with appropriate Federal, State, tribal, and local governments.

(iii) REQUIREMENTS- A project implementation report shall--

(I) be consistent with the Plan and the programmatic regulations promulgated under paragraph (3);

(II) describe how each of the requirements stated in paragraph (3)(B) is satisfied;

(III) comply with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.);

(IV) identify the appropriate quantity, timing, and distribution of water dedicated and managed for the natural system;

(V) identify the amount of water to be reserved or allocated for the natural system necessary to implement,

under State law, subclauses (IV) and (VI);

(VI) comply with applicable water quality standards and applicable water quality permitting requirements under subsection (b)(2)(A)(ii);

(VII) be based on the best available science; and

(VIII) include an analysis concerning the cost-effectiveness and engineering feasibility of the project.

(B) PROJECT COOPERATION AGREEMENTS-

(i) IN GENERAL- The Secretary and the non-Federal sponsor shall execute project cooperation agreements in accordance with section 10 of the Plan.

(ii) CONDITION- The Secretary shall not execute a project cooperation agreement until any reservation or allocation of water for the natural system identified in the project implementation report is executed under State law.

(C) OPERATING MANUALS-

(i) IN GENERAL- The Secretary and the non-Federal sponsor shall develop and issue, for each project or group of projects, an operating manual that is consistent with the water reservation or allocation for the natural system described in the project implementation report and the project cooperation agreement for the project or group of projects.

(ii) MODIFICATIONS- Any significant modification by the Secretary and the non Federal sponsor to an operating manual after the operating manual is issued shall only be carried out subject to notice and opportunity for public comment.

(5) SAVINGS CLAUSE-

(A) NO ELIMINATION OR TRANSFER- Until a new source of water supply of comparable quantity and quality as that available on the date of enactment of this Act is available to replace the water to be lost as a result of implementation of the Plan, the Secretary and the non-Federal sponsor shall not eliminate or transfer existing legal sources of water, including those for--

(i) an agricultural or urban water supply;
(ii) allocation or entitlement to the Seminole Indian Tribe of Florida under section 7 of the Seminole Indian Land Claims Settlement Act of 1987 (25 U.S.C. 1772e);
(iii) the Miccosukee Tribe of Indians of Florida;
(iv) water supply for Everglades National Park; or

(v) water supply for fish and wildlife.

(B) MAINTENANCE OF FLOOD PROTECTION- Implementation of the Plan shall not reduce levels of service for flood protection that are--

(i) in existence on the date of enactment of this Act; and

(ii) in accordance with applicable law.

(C) NO EFFECT ON TRIBAL COMPACT- Nothing in this section amends, alters, prevents, or otherwise abrogates rights of the Seminole Indian Tribe of Florida under the compact among the Seminole Tribe of Florida, the State, and the South Florida Water Management District, defining the scope and use of water rights of the Seminole Tribe of Florida, as codified by section 7 of the Seminole Indian Land Claims of 1987 (25 U.S.C. 1772e).".

Appendix C. President and Governor Agreement, January 9, 2002

COMPREHENSIVE EVERGLADES RESTORATION PLAN ASSURANCE OF PROJECT BENEFITS AGREEMENT

WHEREAS, the Everglades ecological system is unique in the world and one of the Nation's great treasures;

WHEREAS, the Central and Southern Florida Project is originally authorized in 1948 has had unintended consequences on the Everglades and the South Florida Ecosystem;

WHEREAS, the Water Resources Development Act of 1992, authorized a Comprehensive Review Study (Restudy) of the Central and Southern Florida Project;

WHEREAS, as required by the Water Resources Development Act of 1996, the Restudy was submitted to the Congress of the United States on July 1, 1999;

WHEREAS, the Restudy, renamed the Comprehensive Everglades Restoration Plan, was authorized by the Congress in the Water Resources Development Act of 2000

WHEREAS, the Comprehensive Everglades Restoration Plan (the "Plan") will restore, preserve, and protect the more than 2.4 million acres of the Everglades and the South Florida Ecosystem;

WHEREAS, implementation of the Plan will require a collaborative effort among Federal and State partners, and the Seminole Tribe of Florida and the Miccosukee Tribe of Indians of Florida, acting under Federal and State law, to achieve the shared goal of restoration of the Everglades and the South Florida Ecosystem;

WHEREAS, as the ecosystem is restored, all interests seek a level of assurance that they will receive the anticipated benefits from the Plan;

WHEREAS, the Federal interest in restoration flows largely from the substantial Federal resources in the ecosystem, including Everglades National Park and other National Parks, National Wildlife Refuges, and National Marine Sanctuaries, which comprise a significant portion of the natural system;

WHEREAS, in recognition of this interest, the Congress established that the overarching objective of the Plan is the restoration, preservation, and protection of the South Florida Ecosystem, while providing for other water-related needs of the region, including water supply and flood protection;

WHEREAS, section 601(h)(2) of the Water Resources Development Act of 2000 (the "Act), requires that the President of the United States and the Governor of Florida enter into a binding agreement that ensures that water from the Comprehensive Everglades Restoration Plan will be made available for the restoration of the natural system;

WHEREAS, section 601(h)(3) of the Act further requires that the Secretary of the Army, with concurrence of the Governor and the Secretary of the Interior, and in consultation with the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, the Administrator and local agencies, promulgate programmatic regulations to ensure that the goals and the purposes of the Plan are achieved;

WHEREAS, section 601(h)(4)(A)(iii) of the Act requires that a Project Implementation Report (PIR) identify the amount of water to be reserved or allocated for the natural system under State law;

WHEREAS, section 601(h)(4)(B)(ii) of the Act requires that the Secretary of the Army shall not execute a Project Cooperation Agreement until any reservation or allocation of water for the natural system identified in the PIR is executed under State law;

WHEREAS, the State of Florida has the authority to reserve water for the natural system pursuant to Chapter 373, Florida Statutes;

The signatories to this agreement hereby affirm that:

As required by the Water Resources Development Act of 2000, water made available by each project in the Comprehensive Everglades Restoration Plan will not be permitted for a consumptive use or otherwise made unavailable by the State of Florida until such time as sufficient reservations of water for the restoration of the natural system are made by regulation or other appropriate means pursuant to Chapter 373, Florida Statutes, and in accordance with the project implementation report for the project and consistent with the Comprehensive Everglades Restoration Plan.

To effectuate this agreement, the Federal party agrees:

- To include within the President's budget submissions to the Congress requests for Federal appropriations in the amount the President deems necessary to implement the Federal share of the Plan's implementation:

1

- To initiate authorized project planning and design;
- To work with State of Florida on developing information jointly to support the adaptive assessment component of the Plan;
- To use the planning process to supply information for both Federal and State legislative oversight requirements;

To effectuate this agreement, the State party agrees:

- To include within the Governor's budget submissions to the Legislature requests for State appropriations in the amount the Governor deems necessary to implement the State share of the Plan's implementation.
- To undertake reservations of water for the natural system upon completion of each PIR, and to ensure that reservations of water for the natural system will be consistent with information developed in the PIR, indicating appropriate timing, distribution, and flow requirements sufficient for the restoration of the natural system.
- To manage its water resources allocation process to ensure that water made available by each project in the Comprehensive Everglades Restoration Plan will not be permitted for a consumptive use or otherwise made unavailable for restoration of the natural system, consistent with the PIR and the provisions of the Water Resources Development Act of 2000.
- To monitor and assess the continuing effectiveness of reservations as long as the project is authorized to achieve the goals and objectives of the Plan.

PRESIDENT OF
THE UNITED STATES

GOVERNOR OF THE
STATE OF FLORIDA

Dated: January 9, 2002

Appendix D. Proposed Guiding Principles and Associated Issues with the Pre-CERP Baseline

In order to identify appropriate assumptions for the Pre-CERP Baseline condition, the following guiding principles are proposed along with issues that may surround these principles. The public process for resolving these Pre-CERP Baseline issues has included workshops and close interaction with Water Resources Advisory Commission (WRAC), the South Florida Ecosystem Restoration Task Force and the South Florida Ecosystem Restoration Working Group. Presentations of regional modeling scenarios have framed the ramifications of outstanding issues. A matrix of the proposed Pre-CERP Baseline assumptions is included at the end of this appendix.

Guiding Principles Regarding the Pre-CERP Condition

1. General System-Wide/Regional Conditions:

- As a general principle, conditions will be based on the assumptions in the 1999 C&SF Project Comprehensive Review Study (Yellow Book) and the 1995 base case of the *Lower East Coast Regional Water Supply Plan* updated to December 2000 conditions. Deviations or exceptions to this general principle must be explicitly defined.

2. Hydrologic Conditions:

- As a general principle, rainfall and evapotranspiration will be determined based on a period of record for the regional hydrologic conditions from 1965 through 2000.

3. Physical Conditions/Structures:

- As a general principle, the structures, operations, and projects that were in existence as of December 2000 will be accounted for.

  Issue: There were certain non-CERP projects that were not constructed and operational in December 2000 but were Federally authorized as of that date (e.g., C-111 and Modified Water Deliveries). In addition, certain State mandated projects were under construction but not completed and others will be constructed in the near future (e.g., STA 1 East and STA 3/4). Should these projects be included in the Pre-CERP Baseline? If so, they will influence operations, demands, and possibly existing legal sources.

Response: It would be inaccurate to attempt to effectively model Federal and State projects which have not yet been designed and which do not have final operational plans. Including these projects in the Pre-CERP Baseline would result in an inaccurate picture of actual system performance as of December 2000, thereby potentially changing the existing legal source quantification to a minor or moderate degree. Furthermore, it is proposed to include these non-CERP Federal and State authorized, once constructed, projects in the Existing

Condition PIR Baseline through time. Additionally, those CERP and non-CERP projects, which have been completed, will be included in the PIR tentatively selected plan.

4. Operational Conditions:

- As a general principle, operations in place as of December 2000 will be assumed.

  Issue – Certain operations were considered to be "experimental", or were under legal review or development as of December 2000. Examples are the Everglades National Park (ENP) sparrow issues vs. Interim Structure and Operation Plan (ISOP) vs. Interim Operation Plan (IOP) vs. Combined Structure and Operation Plan (CSOP), S-9 litigation, ENP experimental water deliveries vs. 1983 delivery authorizations and South Miami-Dade flood protection issues. How should these conflicting legal and operational authorities be handled in the Pre-CERP Baseline?

Response: Including operational plans in the Pre-CERP Baseline which were not actually in effect in December 2000 would result in an inaccurate picture of actual system response as of that date thereby potentially changing the existing legal source quantification to a minor or moderate degree. It is proposed to include CSOP or other Federally required operational plans in the Existing Condition PIR once these projects are constructed through time. Additionally, those CERP and non-CERP projects, which have been completed, will be included in the PIR tentatively selected plan.

5. Demand Conditions:

- As a general principle, urban demands will be based on the actual amount pumped in 2000 and agricultural demands will be based on the irrigation requirements needed to satisfy the supplemental evapotranspiration based on the actual crop acreage that existed in 2000.

  Issue 1: Demands for urban consumptive uses could be assumed to be that amount which was permitted as of December 2000. Demands associated with agricultural consumptive use could be assumed to be that amount that was permitted to be irrigated as of 2000.

  Response: The CERP and the LEC plan assumed pumpage for urban demands and actual crop acreage for the 1995 conditions that was used as the base at that time. Including permitted demands for urban and agriculture in the Pre-CERP Baseline as of 2000 would result in an inaccurate picture of actual system response as of that date thereby potentially changing the existing legal source quantification to a minor or moderate degree. Additionally, permitted demands will be included as part of the Existing Condition PIR baseline, and actual demands will be included in the PIR tentatively selected plan.

  Issue 2. The method of calculating evapotranspiration is important for estimating supplemental irrigation demand requirements for agricultural crops. Historically, this was done through the consumptive use permitting process by using a method known as

Blaney-Criddle. Recent data indicates that this method over-allocates water necessary for the crop type. A newer method known as Agricultural Field Scale Irrigation Requirements Simulation Model (AFSIRS) was used in the modeling for the LECRWSP and CERP, and is judged to be a more accurate demand estimate method.

Response: No sensitivity analysis was performed for this issue, however adequate data exists to support the enhanced accuracy of the AFSIRS method for determining supplemental irrigation estimates In South Florida.

- As a general principle, non-consumptive uses in urban and agricultural service areas will be accounted for as demands and will include deliveries for prevention of saltwater intrusion, wetland protection, aquifer recharge and other resource protection purposes.

- As a general principle, fish and wildlife demands will be based on historic operational deliveries under Federal regulation schedules and other historic deliveries for beneficial uses by fish and wildlife within regional environmental areas, including the water conservation areas, Everglades National Park and the estuaries.

Proposed Pre-CERP Baseline Assumptions

Feature	Assumptions
	Regional Input Data
Climate	• The climatic period of record is from 1965 to 2000.
Topography	Updated November 2001 using latest available information (in NGVD 29 datum). This update includes: • USGS High Accuracy Elevation data from helicopter surveys collected 1999-2000 for Everglades National Park and Water Conservation Area (WCA) 3 south of Alligator Alley • USGS Lidar data (May 1999) for WCA-3A north of Alligator Alley • Lindahl, Browning, Ferrari & Helstrom 1999 survey for Rotenberger Wildlife Management Area • Stormwater Treatment Area surveys from 1990s • Aerometric Corp. 1986 survey of the 8-1/2 square mile area • Includes estimate of Everglades Agricultural Area subsidence • Other data as in SFWMM v3.7 • FWCC survey 1992 for the Holey Land Wildlife Management Area. (Documented in November 2001 SFWMD memorandum from M. Hinton to K. Tarboton).
Sea Level	• Sea level data from six long-term USGS stations were used to generate a historic record to use as sea level boundary conditions for the 1965 to 2000 evaluation period.
Land Use	• All land use has been updated using most recent FLUCCS data (1995), modified in the Lower East Coast urban areas using 2000 aerial photography (2x2 scale). (Documented in June 2002 SFWMD memorandum from J. Barnes to K. Tarboton).
Natural Area Land Cover (Vegetation)	Vegetation classes and their spatial distribution in the natural areas comes from the following data: • Walsh 1995 aerial photography in Everglades National Park • Rutchey 1995 classification in WCA-3B, WCA-3A north of Alligator Alley and the Miami Canal, WCA-2A & 2B • Richardson 1990 data for Loxahatchee National Wildlife Refuge • FLUCCS 1995 for Big Cypress National Preserve, Holey Land & Rotenberger Wildlife Management Areas & WCA-3A south of Alligator Alley and the Miami Canal. (Documented in June 2002 SFWMD memorandum from J. Barnes to K. Tarboton).
	Lake Okeechobee Service Area
LOSA Basins	• Lower Istokpoga, S-4, North Lake Shore and Northeast Lake Shore demands and runoff based on AFSIRS modeling.
Lake Okeechobee	• Lake Okeechobee Regulation Schedule WSE according to WSE decision trees. • Lake Okeechobee Supply Side management policy for Lake Okeechobee Service Area water restriction cutbacks as per rule 40E-21. • Emergency flood control backpumping to Lake Okeechobee from the Everglades

Feature	Assumptions
	Agricultural Area. • Kissimmee River inflows based on interim schedule for Kissimmee Chain of Lakes using the UKISS model. • Best Management Practices makeup water assumed to be 0% per year.
Caloosahatchee River Basin	• Caloosahatchee River Basin irrigation demands and runoff were estimated using the AFSIRS method based on existing planted acreage. • Public water supply daily intake from the river is included in the analysis.
St. Lucie Canal Basin	• St. Lucie Canal Basin demands estimated using the AFSIRS method based on existing planted acreage. • Basin demands include the Florida Power & Light reservoir at Indiantown.
Seminole Brighton Reservation	• Brighton Reservation demands are the entitlement quantities as per Table 7, Agreement 41-21 (Nov 92). • Supply-side management applies to this agreement.
Seminole Big Cypress Reservation	• Big Cypress Reservation irrigation demands reflect the Seminole Compact (3,917 ac-ft/month; Oct 98). • Supply-side management applies to the Compact.
Everglades Agricultural Area	• Everglades Agricultural Area irrigation demands are simulated using climatic data for the 36 year period of record and a soil moisture accounting algorithm, with parameters calibrated to match historical regional supplemental deliveries from Lake Okeechobee. • Best Management Practices assumed to reduce runoff by 0% annually.
Stormwater Treatment Areas	• Stormwater Treatment Areas 1W, 2, 5 & 6 operational. • Operation of Stormwater Treatment Areas assumes 6" minimum depth.
Holey Land Wildlife Management Area	• As per Memorandum of Agreement between the FWC and the District.
Rotenberger Wildlife Management Area	• Interim Operational Schedule (0.0 ft. dry season to 1.25 ft. wet season).
Water Conservation Areas	
Water Conservation Area 1 (Loxahatchee National Wildlife Preserve)	• Current C&SF Regulation Schedule. • No net outflow to maintain minimum stages in the LEC Service Area canals (salinity control), if canal levels are less than minimum operating criteria of 14 ft. The bottom floor of the schedule (Zone C) is the area below 14 ft. and reads: "No net releases from WCA-1. Any water supply releases must be preceded by an equivalent volume of inflow."
Water Conservation Area 2 A&B	• Current C&SF regulation schedule. • No net outflow to maintain minimum stages in the LEC Service Area canals (salinity control), if canal levels are less than minimum operating criteria of 10.5 ft.

Feature	Assumptions
Water Conservation Area 3 A&B	• Current C&SF regulation schedule. • No net outflow to maintain minimum stages in the LEC Service Area canals (salinity control), if canal levels are less than minimum operating criteria of 7.5 ft
Lower East Coast Service Areas	
Public Water Supply and Irrigation	• Public water supply wellfield pumpages and locations are based on actual pumpage data. • Irrigation demands are based upon existing land use and calculated using AFSIRS. • Miami-Dade County Water and Sewer Department West Wellfield Aquifer Storage and Recovery system (75 mgd).
Seminole Hollywood Reservation	• Hollywood Reservation demands are set forth under VI.C of the Water Rights Compact.
Natural Areas	• For the Northwest Fork of the Loxahatchee River, the District operates the G-92 structure and associated structures to provide approximately 50 cfs over Lainhart Dam to the Northwest Fork, when the District determines that water supplies are available. • Flows to Pond Apple Slough through S-13A are adjusted in the model to approximate measured flows at the structure. • Flows to Biscayne Bay are simulated through Snake Creek, North Bay, the Miami River, Central Bay and South Bay.
Canal Operations	• C&SF system and operating rules in effect in 2000 including operations to meet control elevations in the primary coastal canals for the prevention of saltwater intrusion. • Existing secondary drainage/water supply system. • Selected portions of the Broward secondary canal recharge network based on the Lower East Coast Regional Water Supply Plan.
Western Basins and Big Cypress National Preserve	
Western Basins	• Estimated and updated historical inflows from western basins at two locations: G-136 and G-406. The G-406 location represents potential inflow from the C-139 Basin into STA 5. Data for the period 1978 - 2000 is the same as the data used for the C-139 Basin Rule development.
Big Cypress	• The northern end of Big Cypress receives flows from S-190. • Tamiami Trail culverts are not modeled specifically but resistance to flow to represent the culverts is simulated.
Everglades National Park and Florida Bay	
	• Water deliveries to Everglades National Park are based upon the Interim Structural and Operational Plan (ISOP-9dbR).

Region-wide Water Management and Related Operations	
	• The existing condition reflects the existing water shortage policies as reflected in South Florida Water Management District rule 40E-21. • The impacts of declarations of water shortages on utility water use reflect assumptions contained in the Lower East Coast Regional Water Supply Plan for the 2010 base case.

Appendix E
Agency and Public Comments on the June 25, 2002 Draft

WATER RESOURCES ADVISORY COMMISSION
and the
SOUTH FLORIDA ECOSYSTEM RESTORATION
WORKING GROUP
Naples, FL, July 16, 2002

QUESTION AND ANSWER SESSION AFTER WATER RESERVATION UPDATE
HOSTED BY KEN AMMON, DIRECTOR, WATER SUPPLY DEPARTMENT, SFWMD

Q This question really deals with alternative water supplies. If water that is sent to tide is captured either for water supply purposes or environmental purposes, the agency that did the construction of the reservoir and the re-plumbing, would that water be considered their water for that use since water to tide, I believe, is considered new water?

A Well, water to tide from the regional system we're saying is not included as an existing legal source and will be most of the water that's going to be reserved in the future when CERP projects capture it. Does that answer your question?

Q Does CERP, is it planned to capture all, it is not capturing all of our goods and tides?

A That's a good point. That's a very good point and one that I thought about bringing up in presentation but we need more work on it, but I'll say it now since you brought it up. Initially, the concept was absolutely no water that came out from the regional systems from a regulatory discharge would be available as an existing legal source. I think what we need to do in this CERP update through these five-year incremental runs, is to take a look, and I am not even sure what time frame yet, it could be five years, we might want to go out to the 50-year time horizon, see what the total amount of water in fact is anticipated to be captured by CERP is. Is it 75% of that regulatory water? Is it 80%. And in my mind, it seems like we could make provisions to have that other 20% in fact considered as, or available for, maybe it doesn't need to be considered as an existing legal source, but certainly available for capture by urban communities or utilities.

Q So basically, the answer is yes there is a possibility?

A Yes.

Q Second question. You mentioned earlier that the existing legal sources were being done in some basin-by-basin basis. Is it possible that a specific permitted user may be

impacted, possibly through re-allocation and if so, what recourse do they have if they are impacted?

A Impacted by a CERP project?

Q Correct.

A Yes, I think it is very possible that an individual consumptive user will be impacted by a CERP project and again I bring up Site 1 as a typical example of that, where most of Lake Worth Drainage District relies currently on Water Conservation Area 1 for deliveries and has one of the largest diversion (inaudible) permits that the District has issued through time. The plan in CERP is to make them much more "self sufficient" and retain that water in the water conservation area by shifting their source to Site 1 and Site 1 would be a combination of surface storage and aquifer storage and recovery to provide most of those needed demands.

Q Will reservations be made when the CERP designs are completed or will they all be done before that?

A The only reservation that we're anticipating now to be developed prior to CERP is the rainfall-driven reservation for the water conservation areas in Everglades National Park. The remaining reservations would build on to that initial reservation as each CERP project is designed and prior to it being constructed.

Q When will the sensitivity runs be completed? I know you said you would like to see it by the end of the year, and will they be made available as a report or on the Web or what?

A I think it will be a combination. Actually, we do have, we were anticipating maybe even bringing some of those into today's meeting but with the limited time we have, we knew we couldn't get through them. We've got, I think, two or, I think we have three of the sensitivity runs done now. We've got two to go and what we anticipate doing is completing those probably by mid-August, I'm throwing numbers out that'll probably come back and bite me, or dates, but by mid-August and hopefully be able to go out in the public in the September time frame and hopefully have an agreement by the December time frame.

Q One last question, this actually is for Cecile. You talked about the model runs would be made to show impacts on the existing legal users and if there were some impacts, staff would have to come up with new water, or maybe I misunderstood you, or the governing board could decide? Is that true?

A When establishing a reservation, talking about that piece? Right. When we establish a reservation the statute says that we protect the existing users insofar as they're not contrary to the public interest. So if we did develop a reservation, we did the model run, not sensitivity run, under the PIR, we found that there was some adverse impact on an existing legal user, the governing board would be presented with this issue of whether we

allow the impact or we try and offset it and it gets complicated because some of those users will have been protected under the savings clause. If they're protected under the savings clause, then we have to have a replacement source. But if they're not protected under the savings clause, then we would have that opportunity. My point I was trying to make was that under State law and under the Regional Water Supply Plan, we're supposed to resolve potential competition issues and I think it would be the Governing Board would consider the need to provide a replacement source or help with some water resource development and water supply development if we did have that potential competition. That was the point I tried to make.

Q In reference to the issue on page 13 as to whether or not to include C-111 and Mod Waters in the pre-base, pre-CERP baseline. After your discussion, I agree that those should not be in the baseline. It seems that the baseline and the existing legal source definitions are inextricably tied together. I guess my question is how do we consider those projects once they are up and running, similar to the public comment we had.

A Well, remember that the existing legal source protection only applies to a CERP project. So, there could be a couple of ways to do this. I mean, one is to exclude them up front as far as existing legal source identification. But we can't tie the entire region's hands by things like, that we are considering now, adapted protocols, projects that aren't constructed yet, that aren't CERP. I don't think that we can tie the District's hands by trying to tie all that in to an existing legal source question. So my proposal is that we simply consider those as designed, we provide the water that is currently available to provide it but it is not included in the existing legal source protection.

Q Ken, I apologize for this. Your definition of domestic use is? How do you define domestic use of the water.

A Primarily, those are single-family homes that have self-supplied 2" well in the backyard that provides both irrigation water and/or drinking water for that household. Kind of a well and septic scenario. Those are domestic uses which are exempt under our permitting rules. Private source.

Q The private source for an individual use is exempt under the system now and being exempt, that could be expanded as needed?

A Expanded meaning.....

Q Well, for instance, under State statute for on-site usage systems, you can, on two acres and an acre parcel of land, you can put a well in and particularly if you have offsite sewage disposal, it is very easy to put the well in. If you have two acres of land, you can probably put the well, or even on some acre parcels, you can put the well and a septic tank on there so that as you're driving the land use criteria into large estate parcels, is that a possibility that you're going to privately supply all of these new homes with water.

A Well we don't "supply water".....

Q I understand that but it's part of the regional system. I'm just asking the question.

A The assumptions of domestic wells and irrigation is in our regional models. That assumption is in there. It's an estimate of, depending on the area you're in, of how much those self-supplied irrigation and/or potable water systems affect the water table aquifer, or whatever, depending on the county. So that assumption's in there and those demands are, in fact, accounted for. As far as the land-use controls and driving those, I don't believe that is under our District purview. That is up to a local government decision as far as what and when and where they're going to allow those types of withdrawals and for what land uses.

Q I fully agree with you. I'm just suggesting that under, you known, laws of unintended consequences, you're doing things that affect policies down the road that you are not participating in or looking at and I would suggest that if you are going to add several thousand homes in rural parts of Palm Beach County that are, in essence, going to be disconnected from your natural system, and they don't have to get a consumptive use permit to operate and develop, that, and yet you want to do a redevelopment or you want to do a concentrated housing project that is going to come in to play because you want to do it for transportation reasons or something like that, that you want to concentrate, if they've got to go get a consumptive use permit and under the new scenario they may not be able to get that consumptive use permit because of other water allocations so I'm just, I was glad to clarify that but I don't know whether I'm helping the folks in my industry or not by pointing that out. But, I think the larger issue is that I think you need to look at all the planned uses in developing new allocations for your water use and I think all players probably equally ought to be a part of that. Thank you.

A This may tie directly also into the Governor's initiative on land and water linkage and getting a better....

We still have to clarify, work all those issues out but we have direction to do that.

Yes, and I think the new growth management bill in fact, while I think that folks are fairly vague on that yet, I think the interlopal agreements, I don't think that you're going to be able to avoid the required development of water resources. A lot of folks think that that can happen. That we can say ok we're going to build this water resource but we're not going to build this water resource and therefore we're going to ignore these users and I think that the growth management bill does not allow that. You must...

A Walter, I think we're very clear on that.

Exactly, and you must look at the ten-year horizon on that and must develop the water resources so I think it has to go hand-in-hand as we aggressively look at developing the other natural systems of water availability.

Q Ken, in talking about the pre-CERP baseline, from your perspective, what are the advantages/ disadvantages of including things like Mod Water and C-111 in that baseline

versus dealing with it in another way like the reservations or something like that. You obviously have had some discussion about that.

A I think that the disadvantage at this point is too many of those currently ongoing projects aren't yet defined. As far as operational or distribution of water or even in some cases the storage reservoirs involved and how big they are, water levels on each side for flood control. All those things are ongoing debates that may take years, literally, to resolve. I hope not. I hope they're much quicker than that. But if you look at the past history, they have taken years, let me maybe put it that way. We have PIRs currently under design or beginning design so these issues are critically important to get our hands on now and an understanding of now and to identify what those existing legal source comparison is so that these PIRs can be completed and, in fact, a reservation can happen as soon as possible prior to the project cooperation agreement. So, I think that's the biggest disadvantage of including some of those projects that are authorized but not designed or constructed fully yet at this point in time.

Q Ken, I have several questions and comments. The first one is I believe you're going to define the conservation areas as discreet units. Is that correct? Hydrologic units?

A Currently, we have combined the water conservation areas into one environmental unit and Everglades National Park into one environmental unit. That's the current proposal.

Q OK. With that in mind, I would suggest... You have several models that are being developed in the District that actually define much smaller rainfall basins than the conservation areas are and I know that within the conservation areas there are very drastically different demands depending on where you're located. I would suggest that the reservations be defined at those sub-rainfall basin levels within the conservation areas and that maybe..well so that's one suggestion I would make. The other is, I'd like to know how you're going to deal with new information that will come from the regional simulation model when that comes on line to replace the 2 x 2, if you find inadequacies or inaccuracies in the demand that was defined in the 2 x 2 how will you deal with that later.

A In regional simulation model versus South Florida Water Management model?

Q Correct.

A For those of you that may not be familiar, the regional simulation model is what we're calling the next generation South Florida Management model. South Florida Management model is extremely time intensive. There's only very few people know how to change the code and what those code changes, how that might affect another piece of code. It's very archaic and yet it's the best tool we have available and a very good tool. Regional simulation model is going to be object oriented, basically, in a smaller grid size you can look at much smaller scale projects as they come online versus a 2 x 2 mile grid system that might include a half a mile reservoir in it, you know 1 mile x 1 mile reservoir. So it's going to be able to simulate much more accurately than we have now. It's been

ongoing development for about three years, expected to be, presuming we get appropriate budgeted funds this year. Expected to be completed in about two years. When that comes online, there's no two models going to give you the same results and we're anticipating this model to be much more accurate than the South Florida Water Management model but it's going to take probably a year or two after it's developed and available for use to run these two models side by side to see what those differences are and to see if maybe even the South Florida Management model might be simulating one piece of the system a little better than the regional simulation model. So, long story short, I think once that model comes online, that will be the major tool and it's friendly enough that probably anybody in this room could essentially run it if you had a big enough computer for the entire south Florida ecosystem.

Q So again, how will you deal with changes in identified demands if you've already made a water reservation and a PIR before the RSM came online.

A Well, I would anticipate that we're going to have several, and there's other things that could change as part of this model. Topography could change through time. Recover could have more goals. So, I look at this kind of as a moving, living, breathing modeling effort and even performance effort through time that's going to change. I just think that we need to have as a regular, and I think they're talking about five-year minimum incremental CERP updates that's going to start truing everything up every five years with new land uses and with new population estimates and new topography, and even new performance majors that are developed by recover and maybe new goals in certain areas. So, I don't look at that as a serious problem at all. I just think we need to, through the initial and further CERP updates through time, we need to make those considerations and do it in a public form and everybody knows the assumptions going into it.

Q Could you tell me, are the estuaries such as Florida Bay and Biscayne Bay, would they be considered existing legal users?

A Currently they are not. Currently none of the estuaries are included as existing legal sources. The primary reason for that is that we have had, far as I know, no ecological restoration goals that have been agreed upon for any of the major estuarian systems. That's not to say that there won't be in the future. We do know that CERP, with the new water made available and how it's going to deliver that water, is going to address the needs of the estuaries, we know that. But there are preliminary performance majors and I would hope, and there's ongoing modeling studies on Biscayne Bay, Florida Bay including two minimal flow and level projects under State law that are currently happening that are going to give us better information on that. But I think right now, to say that any water going to Biscayne Bay or any water going to Florida Bay, or any water going to St. Lucie is a good thing. Should it be reduced. Should it be increased? I'm not sure we have the answer. We have some assumptions but we don't have any answers and that's the primary reason that those were left off the existing legal source definitions.

Q This is a great job, great start starting out with reservations and I am sure there's going to be a lot of issues we are going to have to resolve in the future. A couple of comments. I

want to make sure that we all signed on to this plan, this project, for the benefits that we see in it. None of us agreed that as we agreed to this plan we'd be cut off at the knees and that's all we're going to get until the projects come online. I don't think any user group felt that. We all participated because we are looking to the future and reservations, as we perceive, all we want to make sure is when we implement reservations, that there is equity in the implementation of those reservations. As I mentioned earlier, if you're going to offer protection to different users, then offer that protection in an equal basis. For example, I looked at your presentation. You're protecting and reserving water for the natural systems and the other related water users. I think we're more than just the "other" group. There's urban interest, there's agriculture interest, and other users and I think we need...we also should be afforded same protection. The same thing that's when everybody is under the assumption that when we implement the plan we set the reservations first, that's for the natural system. The rest of the pot is what's left over. That's...sometimes I'm reading that in the presentation. That's not so. There is a savings clause and assurance provisions to make sure existing legal users and uses are protected. And again, we did not sign on just because this is what we have existing in the baseline is all we're going to get. I'm concerned about the interim period when the projects come online and we're developing the reservations and we're looking at the water availability on a project by project basis, we're going to take cumulative benefits that we appreciate that's fine. What's concerning me as a user, categorical user, is the interim period. What are we doing at the pre-base CERP line in the ten, twelve or thirteen or fourteen years before these projects come online. At this time I don't think I can support setting initial reservations. It's going to have an impact on the other related water users in this interim period. It's a critical time period for us and I have a major concern about setting initial reservations at this time.

A I'm hoping that the CERP update with these five-year incremental modeling runs are going to show us if that issue is a huge concern or if it's a moderate concern or a very low concern, but I understand it's a concern. But that's going to give us a lot more clarity, I think, I know, when we get this pre-CERP baseline done and the initial CERP update as to are there any gaps in the interim here that we need to address and then we have to figure out how we're going to address them.

A Well just look at an example the volume/probability curves, looking into the differences of those baselines versus the projected volumes that you're planning on setting reservations for. That's a significant amount of water.

Q Just a general comment Ken. One of the things that is kind of worrisome is to talk about the model that will be used to make some pretty important decisions and I think it's important for everyone to understand, it's probably important for yourself and your staff, to qualify the abilities of that model. It's a predictive tool that doesn't really have a hundred percent certainty of accuracy and reliability and whenever you use the term modeling and the results of the modeling, you state it as if this is certainty and it is not. I think it is very important as we move forward to always be looking at calibrating and doing further work with new models but certainly even getting new models to be always

calibrating and trying to reach a higher degree of reliability and predictability with these tools.

A Totally agree and I think that's why we've committed to the regional simulation models and next generation. But you're right, the model really is good for a relative change, or relative difference. Absolute numbers are very difficult until we have a lot of confidence in a model and yet it's the best tool we have available to estimate these things at the current time (inaudible).

Q Ken, I don't think I purport to understand all this. But, one of the themes that keeps coming through to me I guess is something where Fred was going and that it seems to me that if a CERP project comes on board that makes additional water available and that water is my word "allocated" if you will according to the fish and wildlife protection and legal uses and the legal uses are defined as whatever they were at 2000, if that CERP project doesn't come on for fifteen years, I guess the issue that I'm struggling with, among many, is I'm presuming that there is going to be my term "quasi-legal use" that is taking place above the 2000 level during that 15-year time frame, and that may not be an insignificant amount of use such that when a CERP project comes on board it may have ten units available of water, perhaps eight of those units would be ideally beneficial to fish and wildlife protection, two of those units might be covered by legal uses as they were defined in 2000, but because it is now 2015, there is still another one or two units that have come in to play during that period of time and what, how do you deal with that one or two units that may have come in to play either during that fifteen years or at that 15-year time frame because this appears to not give them standing.

A. Well, the pre-CERP baseline and the result in existing legal sources are meant to consider the existing legal users as of December, 2000. So, the anticipation there is that those existing legal users have been getting that water in the past and will continue to get it from the system. So when additional water comes available from CERP, those two units you referenced, those really should be slated to new uses, not existing uses, but any new uses that may have come online between the December, 2000 period and 2010 would potentially have access to those two units depending on where the delivery and the effect of those two units were in the system.

Q I think I see what you're saying. There is going to be, could be a gap there but I think we need to recognize too that the State law, not the savings clause Federal piece, but the State law requires in order to receive approval from the DEP to go forth with the project the District has to give reasonable assurances that existing legal users, and that's people who have permit at the time whether it's 2005, 2010, at the time we're doing the PIR, that they're water supplies not diminished and they are not adversely impacted by the project. So we, even though we may not have that protection beyond 2000 under the Federal we do have it under the State and I think that's kind of what I was saying to Ken is that in that instance the State would need to figure out how we were going to resolve that potential issue, resolve that competition. That's going to happen. Whenever the Federal savings clause has a date certain, there is going to be, unless we don't allow any

additional growth. We're in that conundra but I'm hoping that we can figure out how to reasonably deal with it.

A Yes, and there is a very related issue and that is, under our regional water supply plan authority which we're mandated to update every five years, lower east coast plan included CERP but it included a lot of other stuff in there too, water resource development projects and directed some of the areas for water supply development projects. So, we're going to be continually updating that also, comparing it with the CERP updates. If there is a gap, it is our responsibility to address it in some way.

Q First of all I would like to apologize because I had to go to a national teleconference and I had to go and let my director know that I was in this meeting, that's why I could not stay on my conference with him. But one question that I do have is that once we complete the process that we're going through and everything is in place, will we, do we know if we at the end, the final end product, will we be in the same situation as we are now. To give an example like with the school systems, once they build the school it is overcrowded. Are we having any way of preventing that getting back to the situation that we are now and in 2030 or 2050 we have to start this whole process over again.

A I would like to say no. I mean, we are not going to be in that position. I feel fairly confident in that the only wild card being money, take that out of the equation a second. But if you take the process, the process is that we will continue to update the CERP projects through time as each new project comes on line we'll take a look at what's the existing land use today, what's the existing population today, and we'll be addressing those issues and then they'll have new comp-plan projections and we'll through those in there for the out years that are more trued up through time also from the local governments. So I would like to say that we continue just to zero in on the real life growth issues that are facing us in the future in south Florida and as we do that every five years or so, that we're going to be able to true-up the demand numbers and we're going to have to true-up the projects. You know, if projects aren't providing everything we need then we need to take another look at the projects. Now that would be done under WRDA and of the State and Federal process or it could be done under 373 just the State process and water supply planning but between the two, I'm very confident that we'll get there.

Q My question is back to the State law which provides protection for existing legal users for their full permit use but your pre-CERP baseline takes into consideration the existing use as of December, 2000. How are you going to comply with the State law.

A Cecile, does it...is it the permitted use when it says in the State law the 373 existing legal user..in your mind that is permitted or not.

I think it's permitted. I think it's up to the level of certainty in the permit. I think that's the same kind of question Mr. Boyer asked. How are we going to reconcile the different standards that the one is in the Federal and one in the State law and that's definitely something that we need to figure out.

Q I was just curious why the pre-CERP baseline didn't go ahead and just take into consideration the full permitted use instead of looking at existing.

A That is still on the table. Those are some of the sensitivity runs we're going to do. We're going to put the permitted in versus the actual and see what that discrepancy is. Is there a big difference at all on the regional system or maybe on a certain sector of the region, agriculture for instance in a certain area might have a bigger effect than others and what consequences will that have on the whole big picture of existing legal sources. In many of these cases we might find there is a very little difference, in which case there's really no use in setting up walls and fighting about it you know, it's just put in there as an assumption.

Q You discussed, under the regional water availability rule development, accumulative analysis of existing permits plus new applications. Can you elaborate a little bit on that because I think that gets back to what Mr. Hamilton was talking about and some others. We've never really looked

(END AUDIO TAPE 2)

(BEGIN AUDIO TAPE 3)

...present revenues to be sure that you can pay back the money that you borrow to install the infrastructure and their expectation is that you can use the infrastructure to its fullest extent. I think that's where Lorraine was going was the installed capacity of our system. We consider that to be our existing system. We have pledged the revenues from it and Wall Street expects to get the money back. So I think you need to factor in the financial ramifications to utilities for anything less than that. We'll provide your written comments too. My third and last comment deals with the issue of water quality. It's been brought up before but from our perspective as a water supply utility, the idea of the savings clause providing equal water, I just want to make you aware in Dade County we're currently undergoing an improvement to one of our major water treatment plants, it's about $50,000,000.00 project. We're well into it, most of the way through it in fact, and the purpose of it is to upgrade the treatment to be consistent with the requirements of the safe drinking water act for disinfection by-products. That treatment process that we're upgrading to called lime-softening process was done after pilot studies and it was done to match the water quality that we have historically received. So any change in the water quality, and we're not just talking about nitrogen or phosphorus here we're talking about things like total organic carbon, those types of things that aren't normally perhaps considered in a water quality analysis, need to be included in any water quality consideration or it would, it could negate this expansion, not expansion this improvement that we're doing to the water treatment plant right now. Again, we'll give you our written comments.

Q This is a really outstanding job that you've accomplished and appreciate it. You've got my three pages of issues and concerns.

A I thank you for your detailed review and comment.

Q When I get something I read it and I'm supposed to respond and I did and basically the things that I want to bring forth are some of the major items I have concern but not total. Should has no value in regulation. All the should, shall be or must. Should tells me you can do whatever you want to do. Take them all out. I am very concerned that there is no minimum flows for Big Cypress National Preserve and you have it disconnected from the water conversation areas and we know that that's hydrologically not true. I would like a written definition of rain-driven model with operational examples and for the folks who are new here, I share with you the '71, '81 floods, '81 when it was a big fiasco and it was all over the news and the District said yes we put thirty-six inches of water in the WCAs because we had thirty-six inches of rain. So we had six feet of water in there instead of thirty-six inches. I'm still under the conception that that's what rain-driven model means because nobody has put in writing anything different. If that's what it is, we have a serious problem. Also, you bring up consumptive use permits that are used and those that are outstanding but not used. Loxahatchee River, folks who are watching that know that may not see sitting in the closet how many consumptive use permits volumes of water are not even being pulled out yet. Can we get a simple spreadsheet basin by basin, system by system, that shows consumptive use permits used, consumptive use permits that are allocated but not used. Because according to what you said, you plugged in the non-used consumptive use permits already issued so the people who are watching these systems may not know it, but half of that water may already be gone. You see what I'm saying?

A We'd be happy to get you a spread sheet on that.

Q It's also my understanding that 80 percent of the water created by CERP projects is for the natural systems. Is that not still the policy or the position?

A I'm not sure that was ever a poll.., certainly by the District. I do know that those numbers were derived, I believe, by Richard Punt, and went into the Corps report or, what's it called, the Chief's Report. However, remembering that that 80 percent was based also on, it was not based D13R, it was based on D13R4 that had the additional 275,000 acre (inaudible) to Everglades National Park as an assumption that went into the 80 percent. In fact, that was not in the approved D13R so it's close however, it's probably 75 percent, something like that if you excluded that 275. It's probably 75 percent.

Q Did we lie to Congress and say that 80 percent was for water? Is that what we're going to go back and tell the people in WRDA this year, we lied to you? Somebody did.

A Jack, I think what was said was that our best estimate at this time is 80 percent of the water would be for the natural system and 20 percent would be for other users and the bottom line is even at that, CERP was based on a win/win situation.

Q I understand what you're saying and there's a lot of should in front of what you said. Best estimate at this time....

A That's exactly right because that's where we are at this time.

Q Those are my concerns here, new ones, and whenever you get around to responding to my concerns appreciate it.

A We will respond sir. Thank you.

Q Ken, I would like add us to the list of the parties expressing concern over the issue of release, water releases to tide, specifically as it relates to Biscayne Bay. I am glad to see you sort of recognize that its problematic and..

A That's still an outstanding issue.

Q something that we need to work on. I mean, that's something we absolutely would like to be able to participate in. It makes me think of the question, and I don't know if this overly simplimatic or whatnot but as a project like Coastal Wetlands proceeds, as we discussed this here and (inaudible) reservation for any release to tide. In my mind I'm sort of seeing as that team starting from sort of what they're looking at zero discharge to the Bay in addition to whatever other future water they may be looking for. (Inaudible) starting from zero there's nothing going into..

A I think what they're really, we're trying to say so far is that a CERP project, because a CERP projects are really there primarily designed to restore the Everglades, restore the estuarine areas, that the reservation is going to come during the development of the PIR for those CERP projects and that water will be slated to go to Biscayne Bay or Florida Bay or Water Conservation Area 1 or the Caloosahatchee, and at that point in time is where those significant environmental areas will get their guaranteed water supply through a reservation. It's very strong, you know, considering what they have now which is basically nothing and even the targets are yet to be defined. So, that's what we're really saying.

Q And then thoughts on the inclusion of mod waters in C-111 comes to mind probably from the County perspective would be potential flooding benefits that could be (inaudible) to come out of those projects for the County and it makes me wonder is something similar slated down the road? Is this for coming up with flooding levels and I don't want to start a whole conversation on that but is an envisioned in terms of establishing as this is being established for water reservations.

A Yes, and then there is a provision in WRDA, and I believe in State law Cecile, that talks about maintaining the existing flood protection that you have so those issued will certainly have to be addressed in each project implementation report, we're not only going to have to have a model that looks at impacts on existing legal sources, impacts on water quality, but also impacts on flooding. Flood protection.

Q My question is to the speakers as well as to the Chairpersons. Before I ask the question I have to give you a bit of information which will qualify my question and that information is that this is my second WRAC meeting that I have attended, both meetings I found to be very informative and highly educational. In fact, it made me look at water from a

different point of view. Typically, I pay a lot of money to attend seminars, continuing education courses and workshops to get this kind of information. I'm, being put up very comfortably to be educated. I know my job is as a WRAC Board Member is to advise the Board and for this to serve as a public forum and I see the public forum in interchange of idea. But my question is, and its probably mainly to the chairpersons, how we advise the Board. I feel I haven't participated yet. I'm leaving with all this wealth of knowledge and comfortable rooms and nice coffee but I, how can I advise the Board, how can we help.

A When we get close to the end, when this is coming up in front of the Board, we'll take it up for comment with the WRAC. Right now we're just getting briefings. You're going to get in the actual WRAC requests for input. You know, specific ones. So, you know, I think the Board, the staff needs to respond to you and then when it comes to the Board, if the issues have not been dealt with, that you dealt with the staff, then we respond, then you have the right, I guess the leverage to go talk to the Board directly.

Q I have a question about the definition of existing legal sources. The first part of the definition states that existing legal sources are the quantity of water available of which there was a dependence consistent with Federal and State law, and my concern is with the word dependence and how that's defined. It seems the way that it's used, it's adding another layer of discretion on top of the already existing Federal and State definitions of legal users, and secondly, for the tribe specifically, does dependence for the tribe contemplate the tribe's dependence on their not being excessive water levels in WCA-3A.

A First off, the word dependence is meant to modify the word locations not quantities. So it's dependence on a location's quantities that were available but dependence on the locations and probably I'm going to re-write that to make it a little clearer. Your second issue on high water table sounds very similar because we really didn't look internally specifically when, on our overheads regarding regulatory discharges but it sounds like the areas that are too deep, the areas that exceed even a natural systems model-type target for the rainfall conditions, it sounds like they should not be considered to me as an existing legal source, if that was your question, but they would fall in the same category as regulatory discharges that are going to be captured by CERP in the future and stored and delivered differently.

Q My first issue is on the difference between rights and reservations. I understand that existing use (inaudible) defined (inaudible) to defined as an existing user and Cecile said that is not a property right (inaudible) three-pronged test and all that but reservations are different all over the country, especially out west where their water laws a little different that ours, there's a concept known as a winter (inaudible) and clearly the tribe has water rights and if an existing use is not a property right, it's a license as it's being described here, then the question is what is the tribe's water rights and we have always advocated that we wanted natural system levels water rights but that's really difficult when they keep changing the model every five years. The model, of course, is based on the assumptions and the assumptions keep changing every five years so we have a constantly

moving target. We'll never know what the water rights are and I'm a little concerned about this constantly moving target. The proponents would say that we've, we're doing adaptive management but, you know, this was a very delicate balance when we went to (inaudible) with this plan between urban and ag and the environment and if we change that balance, we're very likely going to disenfranchise one group or the other. There's only a limited quantity of water to be divided up. Constantly changing how that division is made by changing assumptions and thereby changing the models, seems to me to be a very dangerous proposal. So I guess the first question is how in this document do you recognize tribal rights to water as opposed to just define us as an existing user and the second is, and maybe you could address this constant moving target by changing the model every five years.

A Well let me talk about the second one first. The models are changing and sometimes they're not every five years, sometimes they're every year, but it's based on better, more refined, more accurate information almost every time. A lot of it's topography, especially Everglades topography. I think we just incorporated a new survey for 2A, Water Conservation Area 2A that we got in place. So, there' subsidence issues that we have to take. This is natural systems model and South Florida Water Management model. We have to, you know, consider those issues and those changes. I look at modeling change and you're right. I'm probably one of those who can't just say adaptive management but certainly adaptive management, in light of all interested parties having input, is this the right information we should be putting in here? Does this make sense to everybody? Do you agree with the data? I mean, all those things need to be done in a public forum before we just carte blanche change a model. With that said, I think that also ties in very nicely with recover. I mean, if conditions change in the future, not because of hydrology but because of a model changing and the predictions changing, everyone's got to buy into that and understand that and say yes, this makes sense, this is better information and this first target probably was not appropriate and we need to revise it now to this target. I don't see that as a bad thing but you key that also into the word balance and I don't think any of the modeling changes we're making are causing a significant change in balance, i.e., water flows to one area or another, than was so far originally envisioned in the re-study, the Lower East Coast plan or others. I think they are much better accretes, primarily, accurate estimates, primarily in the environmental areas of appropriate hydropattern depths and real world conditions as they exist today. So I think I look at it as a good thing, positive thing. And the only comment I have on Miccosukee water issues, if you will, are in relation to existing legal sources that you all have had a dependence on a source of water as far north as Lake Okeechobee in some cases, maybe even further if we wanted to take it up that far, and those hydropatterns have been reflective of historic operations and water management facilities that have been in place and that's the part of the existing legal source for 3A and other areas that we need to identify, and 3B.

Q The other concern I have is that almost all of this document seems to key on low water and we talked about Regional Water Supply planning and water shortage planning, and then lows in levels planning, consumptive use, all of this is about low water conditions..

A Except reservation.

Q Well, historically, conservation areas where the tribe's lands are locate, have been used to stack water and we're equally concerned about high water conditions out in the conservation area. I think maybe elaborating on fish and wildlife aspects, you know, habitat for fish and wildlife could be used to prevent those high-water-type conditions. So, for us, we're not focused just with drought conditions, but also with what do you do with the excess water? We don't want to be an equalization base and just to supply water to the park, for example, and we don't think that's an appropriate type of, not that it hasn't existed in the past, but we're looking not just at the low water conditions but high water. So, we'd appreciate if you would elaborate in this document on the other end of the spectrum as well.

Q Just to follow-up to what Gene's talking about. It seems that most people think when you talk about natural restoration they think about not having enough water and we need more water but in this case it's really the opposite situation, in most situations, not all situations. But the question is that when you start looking at natural system, or natural reservations, it's not just having a bottom limit but it's also got to have a top limit. Too much reservation is also a bad thing. I don't know if you've thought through that or not but I think that's something that's very important here and to go to the natural system. It may not apply in the existing situation because if you're going to tell the tribe that you need, you're legally authorized, they're going to say are we going to want all this water. OK. But, I mean, that's something to think about. How you deal with that kind of situation and I'm still concerned, as a talked to you before about, and I'm not sure, as this evolves I'm sure it will become clearer and clearer, but the pragmatic side of going out and making this reservation using all the things you've put in the report so far, which basically gives a amount of water based on some probability over that 36-year-period of record. How do you go out and make sure that's what's happening I don't clearly see the link, especially from the standpoint of the way it's designed at the present time, at least as you've explained it and I've understood it, that you can really only check to see if you're doing what you need to do after the time is already over, and then you may have made a big mistake and it may not balance out. How do you reconcile those two things.

A In the first design of the operation manual, obviously is going to be based on historical 36-year-period of record, may or may not happen in the future and probably won't in that exact same distribution.

Q Right because it's all going to be based on the hydrologic and physical conditions that exist.

A Right. So you're going to presume that there's so much water potentially available to come in to a system that's going to have so much storage and it's going to have a structure discharges out with so much capacity. When those conditions are right, the myriad of things can happen, obviously. It could be full, reservoir could be full, you can't bring in water, reservoir could be empty, you can bring in water, or, hopefully under most conditions, the reservoir can deliver water per downstream targets,

environmental targets, probably stage based, which is why I talked about that stage-based-type of WSE-type schedule decision package, that hopefully can cover enough gambits in those 36 years of historical rainfall to handle most of those situations of inflow and outflow and meeting stage-based targets. That's, I think, the best we can do in the design of a facility, and we're going to operate it real-time and maybe we could make some..

Q (inaudible) operate it based on those rules it you develop (inaudible).

A Initially, and then we're going to test it and we're going to operate it and before it's certified or whatever mechanism we use where the reservations is actually delivered..

Q That operations manual create, then that creates a reservation.

A I think it implements a reservation, I don't think it creates a reservation. It's reflective though of the operations that were in the PIR which came up with that curve which is what we're talking about reserving so it's reflective..

Q Well how do you what's reserved unless you've gone through that process?

A Because, conceptually, on the historical rainfall you're saying, we're assuming, that that's going to cover 99 percent of the situations you're going to run into hydrologically in a field. The testing and operations will probably enhance that. May have to change and tweak the operations manual based on that testing and operations and therefore, may have to revise the reservation to reflect that. Then, through time, you operate it based on that.

Q The reservation and the operation is inextricably linked.

A That's true. That's true. I agree with that. As far as delivering it, the way and the time distribution is assumed in that PIR and/or the real world operations. I think the operational manual is inextricably linked and needs to be referenced in the reservation rule.

OK. Good.

A Now, how that facility actually operates is kind of a hindcast as far as how well did we do. It's a kind of report card.

Q I understand all that. But, I mean, it just, ok. So basically, when you operate you are implementing the reservation.

A Yes.

Q Thirty-six, you said something about, you know, obviously there's going to be times outside of the 36-year-period where we have droughts that go the 100-year drought or

whatever we maybe we didn't have, I don't know, and you said in those cases we've got to take into account measures to balance the adversity and that led me to believe when you said that that when you're within that 36-year-envelope of whatever happens in that 36 years, you've taken care of everything your operations schedules and you really shouldn't ever have an emergency if you have those kinds of situations.

A If you look at it on a yearly basis, that's probably true but if you look on it more of a short-term basis, let's take a week slice in this yearly amount of rainfall, in that period of record the highest weekly amount of rainfall might be five inches in some area. Now the whole year may have forty or fifty inches. OK. But that one slice of one week in the middle of July or a hurricane comes through, it could be a five inch rainfall. In reality, you could have seven inches, you could have ten inches from here on out. You don't know what's going to happen. That's not that much of a deviation. Could be caused by tropical storm, a hurricane or simply a distribution that's different than historically happened in the regional system. Under those cases, there still may be short-term or potentially long-term, in the case of a hurricane, impacts on how you operate and where that water needs to go to protect the system, protect the fish and wildlife, protect the public interest.

Q But essentially what you're saying is, and it's (inaudible) by what you've said about the 36-year-period of record, it we're within that envelope we're basically taken care of as we go through this process with the operations schedule, that you've got a situation where you are really lessening, greatly, the amounts of times you have to deal with water supply emergencies and those kinds of emergencies in the Everglades.

A I believe so.

Q Ken, forgive me for one minute. The chairs asked me to note we're getting jammed up here just a little bit and it might help a little bit if you have issues that you want to discuss, raise the issues so Ken's got them on his radar and so we can do a follow-up. Otherwise, I don't think we're going to get to lunch. I apologize for a little bit of a double standard but, you know, we can't get all the explanations here but I think if you raise the issues to where, you know, Ken and staff are aware of them we can do some follow-up later. And I apologize but we're just going to get to lunch. Thank you.

Q A couple of times land use came up and I really want to emphasize that the District has the authority and, we believe, an obligation to make comment on land use decisions within the District's range. A couple of years ago the district co-partnered with Palm Beach County in developing an AG Reserve Master Plan which addressed open space, agriculture and water resource issues and, for your information, a surprise to a lot of us, there is a (inaudible) plan amendment coming through on the 24th. It didn't come through the normal process, it just kind of came slipping right in, that will affect 1,500 acres in the AG Reserve. What I would like to request and urge the District do is become increasingly involved, provide meaningful comments and even at times when necessary take the position of intervention in some of these land-use decisions. The AG Reserve is, as you know, 20,000 acres and it can go 1,500 acres at a time, 500 acres at a time.

You're losing valuable water resource opportunities by these land-use decisions. Also, keep an eye on the sector plan. We've said that several times. You've got to watch this one. It's a moving target. You've got to watch it and you have to be prepared to make comments.

Q Ken, let me join the ranks of people congratulating you and Cecile and your staffs for, I think, a job very well done. An important milestone reached, I think, with the release of this paper. I'm going to be very succinct because my colleagues have raised so many good issues. A couple that I want to raise. I want to raise an issue that, I think, and I certainly intend that should underscore an issue that the tribe raised but from a slightly different direction. This issue of high water in the conservation areas. One of the things that concerns me about the savings clause and the way we're sort of talking about it now. What happens..Because consumptive use permits are tied, as I understand it, in part to the hydrologic conditions in the compartmentalized Everglades so you have a consumptive use permit, take water out of 3A until it reaches a certain level and then you take it from your secondary source. What happens when there is a conflict. What happens when a consumptive use permit is, this is going to be an important point, what happens when a consumptive use permit relies in part, or there is a dependence on, too much water in 3A. So for example, if we have a CERP project that attempts to move water out of 3A or mod waters for example, I can see us teeing up a savings clause problem because someone might argue if you move water out of 3A you're affecting my source and you're switching me to my secondary source sooner that I otherwise would expect it and that seems contrary certainly to the overall intent that we're trying to, I don't, you know, I don't, I know it can't be answered here. I want it to go down on the record an issue that we have to deal with. Decompartmentalization and that kind of stuff. Projects that don't make new water available but that move water from one basin to another and whether or not those present savings clause issues. The other issue I wanted to raise, and I think somebody else raised it, I think Lorraine might have raised it, and I just wanted just to make sure I got it clear Cecile. The regional water availability, which incidentally I'm so excited that after three years I actually now understand regional water availability, will that, to what extent does that carry with it, will that rule carry with it a presumption of the public interest test being met or will it not? In other words, you know, you identify this pot of water, a new permit comes in, competes for that water. Will that permit still have to demonstrate that it's consistent with the public interest (inaudible).

A Yes. I haven't really thought through whether it's a one-for-one trade off. I'm sure there are other public interests' factor that we'll want to look at but I think that is definitely going to be a significant piece of it. I don't have a good answer.

OK. So just log as maybe an issue and then finally, Ray, you touched on an issue that we're, I'm struggling with too and that is, but I actually, I think, have an, my initial opinion is different than yours which is that I think that it's actually impossible for water to be both under the savings clause and regional water, included in the regional water availability pot. Because under the savings clause what you're talking about, certainly the intent of the savings clause is to protect existing folks', December, 2000, sources. Regional water availability, when we define it, any excess that pie wedge that I think

somebody about, Barbara was talking about, that's water that people aren't using and that can be used (inaudible). So in other words, you can't be water that's both being used in December, 2000, and is not being used now. You see what I'm saying? It's sort of .. They seem mutually exclusive but it could be that I just don't understand it. So, anyway, I just need to understand that better.
OK.

That is all. Thank you.

Thank you.

Q My issue is something I brought up before and that's with the upper St. Johns, the speed bump for that, for us and agriculture, was once the project was done and in the ground and they created such a great habitat, endangered species moved in and all bets were off in the upper St. Johns for who gets what water because the endangered species that moved in dictated..

A They took precedence.

Q They took precedent over the (inaudible) citrus and we lost a lot of crop and the snail case moved up and there were a lot of them, there were tons of them, there were more there than at Lake Okeechobee in that basin because the habitat was so superior and that's going to happen throughout this project. You're going to create a lot of great habitat all over south Florida and a lot of users around this table and for environmental reasons and for agriculture reasons are going to be relying on the reservations of water and something that I think we all know that the Endangered Species Act takes precedent over that but maybe there's some way we can talk or figure that out working with the Federal government because it'll create a problem. We lost hundreds of millions of dollars that year. One specific year when we couldn't get to the water and had a very expensive crop fall to grounds and there were tons of snail (inaudible). There wasn't any of them found dead or harmed or injured but because the project required that, we could not touch the water and there are ton of nail (inaudible). So, just something for us all to consider because all bets are off when endangered species move in. So, (inaudible).

A Work with the Federals.

A Let me just real quick say that you're right, that's an issue that we've got to work on and my boss has said this is something we have to figure out sort of a more progressive way of working on endangered species issues and that's not the answer to your question but at least it's acknowledged that that's an issue and that's a problem that we have to work on harder than we have.

Q I'll be short. You've been under pressure for a long time Ken, done a great job. Just want to really point one thing I really like what you have in this relative to the regional water availability and that is the water conservation part of it, something that's been dear to my heart for some time and recognizing that in particular urban water conservation

there is a lot of things we can do with that and when we save water through that process we don't have to do anything else, we're already producing that water. It's water made available for something else. So I'd like to say it's just add a little more stuff to the water conservation side of that and do as much as we can in that arena.

Q Thank you Ken. I have a question. Well first of all, I think this has been so helpful the question/answer. I would really appreciate it if there were detailed minutes prepared of the question and answer session. I think that would help, at least with me, because it's so complex and going back and reviewing and having a better understanding of the document your presented so I would really appreciate that. I have a question though regarding the legal existing source and legal existing user, what natural system qualifies as either in addition to Everglades National Park. When I look at that definition outside the Park, I'm very unclear what natural systems are protected, the Loxahatchee, the Caloosahatchee, Big Cypress Basin, the Fakahatchee Strand, Seven Golden Gate Estates, are those part of the environment that's protected by this, any of those?

A From an existing legal source perspective? I must admit, and I think it was may have been you, Jack, that brought up the fact that some of the areas on the west coast were not included in our graphics which is an omission. We were so focused on the Regional Everglades piece of this we, and their potential tie-in to regional water availability and other things, we neglected to put in some of these other environmental areas so let me just take a look at all that issue and see how many we need to put in there and I'll identify those and revise the graph.

Q I thought it would be helpful to have some maps so we're clear. Like a map of when you calculate the regional water availability pie, what is the map of those boundaries for you to calculate that number or when you calculate the pot of water available and then you're going to calculate the actual permitted, actual use vs. actual permitted, what's the boundary of that area that you're plugging into the model and is the west coast of Florida going to be included because Caloosahatchee Basin was cut off and I was going to ask you..

A Certainly the Caloosahatchee will be included.

Q But I think it would be helpful to have an understanding of what boundaries you're using on those calculation.

OK.

Thank you.

Q Sometime ago Lorraine basically dealt in large part with my issue and that's on consumptive use permitting where we say the permit applicant must provide reasonable assurances that, among other things, the use must be consistent with the public interest and I thought I heard you say that there is no definition of what the public interest is yet and that 373 does not provide any guidelines. Well I want to go a little further and ask

whether or not are there any conceptual policy considerations afoot and if so could you share with us where you're going with that at this particular time.

A We already have a rule in our conditions for permit issuance on public interest that references a couple of the intent sections in Chapter 373 like the intent to provide (inaudible) reasonable beneficial uses of water intend to protect fish and wildlife. They're very general. What we had proposed to do was add a specific link in our public interests rule to CERP referencing the CERP, the State Statutes on CERP in our public interests rule and also include in our public interests rule a consideration of consistency of a project with the Regional Water Supply Plan and have a link there. So we're really getting into territory that can be very controversial but we think it's time that, that in order to look beyond just the potential impacts of a project itself, we need to look at it cumulatively with all the other potential future projects, more of a public interest consideration. So we're moving towards expanding it basically beyond what we've done in the past. Really hasn't had a lot of meat on the bones in the past. We've concentrated on whether use is reasonable, beneficial and whether interferes with other uses. So, and we have on our web site a draft of that public interest rule that we've drafted. It's in the water use regulation web site web page so you could see a copy of where we're going and we think we'll be expanding that once we get into the C-list rules and to CERP, more specific CERP-related issues. Does that help?

That helps. Thank you.

Q Good afternoon again.

Hi Wayne. Thank you for the comments.

Q First usual editorial comment about the lost of tide you've got to get every time. Just because it went to tide doesn't mean, doesn't contribute to the environment nor does it lost to the Florida economy.

A Didn't I take lost out of this draft?

(Inaudible)

A I thought I used excess this time.

Q You used excess sometimes. I hereby concur you using excess all the time. Appendix C, you have blanks for the Caloosahatchee line, the Western Basin lines on the assumptions and this is a work task I'm probably going to ask you to assign to us of the (inaudible) Florida feasibility study Janet. Could we be assigned to try and fill in those blanks for you at our next meeting or two so you can have some area representation?

A Sure.

Q You wouldn't mind?

A If you'd like to help on that we'd certainly appreciate it.

Q OK. Because yes, the assumptions there, particularly on existing uses and existing sources. A technical question, help me understand, is C43/S79 a/k/a (inaudible) a use or a source under this document?

A Source.

Q Thank you. Can we get a... I got an answer and the rest of you didn't get one. I'll mark that down. This is a draft from the staff, can we get the statement in the draft report, roughly page 21, to establish a pre-CERP reservation for Charlotte Harbor Caloosahatchee River estuary, national estuary?

A If we can have a restoration target for the river and then run a model that shows the hydro period for the river and what, how much goes to the estuary that is not currently being used by consumptive uses, we'd be happy to reserve what's left over.

Q OK. Can the minimum flow level (inaudible) be part of the year 2000 baseline?

A No.

Q OK. Can we change the definition (inaudible)?

A If you, probably need to go to WRDA and change the date of enactment.

OK. Possible.

A None of the other (inaudible) included as you know.

Q No. You know, you've raised the issue, I mean this is not (inaudible) you've raised the issue how to perhaps to identify estuary needs, this may be the way to do it for a baseline.

A But understand, we are still attempting to deliver that when it's available.

I understand.

A So we're not affecting the fact that it's there in law and it's in recovery.

But you know, this is now getting down to the basic conflict I see for the overall base for us which is the difference between use that's a use and use that's a permit because our concern is that you (inaudible) we have permits out there not in use and if we then have made these permits use and we go build these structures, the water goes to them...

A I understand.

Q ..and nothing goes out. So, I guess my summary statement is until I get to know this better, you're the expert. You've worked hard on this, you've lived this, and the rest of us try understand it, I'm trying to avoid a (inaudible) where we've created a definition system that a permit that is not in use is for this purpose and use and a flow that occurred to the estuary in here does not occur.

A And I think the sensitivity modeling runs that we talked about running will help get a better handle on that. Hope you're involved in it.

Q I too want to thank you very much Ken. You've done a great job.

A Everybody please. It's not just me.

Q Sincerely, and Cecile. And also the questions have, that have been raised have been really good questions and you only said no once and that's really amazing. Anticipating these discussions and where we are today, Broward County has put together a sort of consensus with Lorraine's department and our department and also the Broward County Water Supply Technical Advisory Commission so I would like to not read it to you today but pass this out so it's a matter of public record and we get to share our position on this issue with you. That's one thing. The concern that we have, and I have spoken to you about this before, but it's of course on page 19 and Broward County has relates to regional water availability. As you know, Broward County has a IWRP, an Integrated Water Resource Plan, and we want to maximize the available water not just for consumptive use but for our resources, for instance, the Pond Apple Slough and our $400,000,000.00 bond issue to buy public lands. So we want to be sure that once you set the baseline, whatever x-amount of water is, we want to be able to utilize our IWRP to manage the water on the urban side. You know, passing the three-prong test then, and you know, with consideration certainly with CERP, how can we be assured that we will have that flexibility or that authority and is there a chance that this could be some mechanism for a county that might be a willing county that wants to have their own IWRP to be able to do this?

A Well, I think the actual mechanism for assuring that it's going to work is probably going to fall in the consumptive use permitting realm eventually. However, I think you're going to get a lot of insight, again on this pre-CERP baseline and the subsequent existing legal source identification and then plug that into your local integrated water resource plan model and see what the effects are. You know. So the issues may be premature to worry about them. I'm not sure how much additional "regional water" you were anticipating as part of this plan. I know it was moving a lot of water that you had in the county around to be used more efficiently and I personally don't see this as being a huge issue from the plans that I have seen for Broward County. But again, the pre-CERP baseline and subsequent existing legal source is going to help identify if it's a problem or not and we'll be working with you together to try to resolve any issues that come up.

I would like to state that I think it's really important that we all work together with the same modeling interests so that they don't develop any conflicts.

A Agree.

Thank you.

Q I just have a brief comment about Florida Bay and the downstream end of the system. Recently, members of the Florida Bay Program Management Committee met and actually developed draft performance measures in support of the Florida Bay and Florida Keys feasibility study. It has taken a long time to get to this stage. We hope that these will go out for review and revision and finalization and that they'll help define the fresh-water needs of Florida Bay and the downstream part of the system.

A Great. Do you know what the timing might be on the completion of that review?
(END AUDIO TAPE #3)

(BEGIN AUDIO TAPE #4)
(Inaudible) The document that you have, the draft document, was requested of the task force by the Congress based on a recommendation of the general accounting office and they're working on this. This is a coordinating draft we're, as Mike said, we're seeking your input. Farther along in the process, is the current proposed revision to the task force strategy document and this is the coordinating (inaudible) document that Jack is referring to. I would suggest, Mr. Chair, if it was alright, that we also provide the copy of this draft because both of these documents have project sheets. These are just the land acquisition projects but these land acquisition projects become folded into the various other projects that are part of this document and a lot of times, as Jack is pointing out, the devils in the details as we try and fit all these things together and I think we very much would appreciate any kind of input from the folks on this group on both of these documents as we're trying to get them so that they reflect that. Jack.

Q It will be short, but I was going to bring this up under member issues, but since we're talking about coordinating (inaudible) document, if you were a WRAC member and you did attend the task force meeting and you were a WRAC member and you (inaudible) attend the working group meeting yesterday, WRAC members are not getting the same documents that those other two organizations are and we are supposed to be the official advisory arm to the task force. So, I'm going to make a recommendation to Chairman and to (inaudible) that WRAC members receive all the documents that the task force gets and all the documents that the working group gets and we have to do more reading and the other groups will get the same documents we have. Otherwise, we wind up not all saying the same thing on the same page. Mr. (inaudible) said yesterday he had thirty-day extension on coordinating for success. We don't meet in August, so this body won't have time to address it by the time he has his document out. I'm submitting my recommendations individually as an organization.

A OK.

Q Jack, I will not be able to mail to you the hard copies in time for the Monday meeting but I will, on Thursday morning, send an e-mail out with all the links where the documents are so that you can read them on the web.

I think other questions or issues that we need to deal with prior to having these breakout meetings.
Obviously, everyone's welcome to attend. If there are other organizations or people you feel have issues, you're welcome to invite them to sit in and listen. Mike?

Yes sir. I will plan, in addition to providing the links, working with Julio (inaudible) the links about the links that he had talked about for both of these documents, I will plan to bring paper copies of these to the meeting on Monday so that people who are really wanting to get into it, we'll have those written copies and we can do that.

Alright. Jack.

Q (Inaudible) with land acquisition. I understand Senator Graham has a bill he is working on in Washington, D.C. Perhaps somebody could provide us a working draft copy of that bill. Because I understand it addresses some land issues in Florida and if we're going to be talking about CERP and land acquisition issues, we should know what Senator Graham's thinking.

A Yes. If we get our hands on one we'll definitely, if one's available we'll have it. Rick.

Q We're just making a few updates to land acquisition strategy draft that, especially those that Jack pointed out yesterday to us in the working group meeting and there may be a couple of other changes but we'll try to get you the latest, will get you the latest version by your meeting that we have.

END OF Q&A

Reservations Comments
Audubon of Florida

Background

Key to the passage of the Water Resources Development Act (WRDA) of 2000 was establishing mechanisms to ensure that the natural system would get its share of the water from implementation of the Comprehensive Everglades Restoration Plan (CERP). This concept is known as "assurances of project benefits" for the CERP and its projects. Central to this concept is the identification of the quantity, quality, timing and distribution of water needed for the natural system in the Project Implementation Report (PIR), and execution under State law of a reservation of water for the natural system prior to the execution of a project cooperation agreement (PCA). Also central to assurances provisions is the agreement between the President and the Governor that ensures water "shall not be permitted for consumptive uses or otherwise made unavailable by the state until such time as sufficient reservations of water for the restoration of the natural system are made under State law." This must be done "in accordance with the project implementation report for that project consistent with the Plan." Section 601(h)(2). There are several other checks and balances within WRDA that require reservations be established and these are tied to the documentation process. Finally, operations manuals must be consistent with reservations to ensure that once the infrastructure is built and a reservation is established for a project, the operation of that project delivers the reserved water to the natural system.

Reservations shall be completed through the already established state statutory framework. 373.223(4) states:

> The governing board or the department, by regulation, may reserve from use by permit applicants, water in such locations and quantities, and for such seasons of the year, as in its judgment may be required for the protection of fish and wildlife or the public health and safety. Such reservations shall be subject to periodic review and revision in light of changed conditions. However, all presently existing legal uses of water shall be protected so long as such use is not contrary to the public interest.

Consumptive use permitting

The consumptive use permitting (CUP) process affords an opportunity to balance water withdrawals with protection of the resources. A three-prong test must be met to receive a consumptive use permit. The use must be "reasonable-beneficial", it cannot interfere with any presently existing legal use of water, and it must be consistent with the public interest. Additionally, a permit must be consistent with the overall objectives of the District and not harmful to the water resources under Chapter 373. A recipient of a permit has the right to use water consistent with any conditions on the permit for the duration it is granted. After granting the permit, the recipient obtains the status of an "existing legal user". This use is protected from the establishment of a reservation under § 373.223(4) and the use shall be protected as long as it meets the public interest test. WRDA uses the broader term "existing legal source" of water, as opposed to "existing legal use."

Recommendation: The use of the broader term "existing legal source" versus that of "existing legal use", found in state law, should be interpreted to include both the "existing legal use" of consumptive users, as well as the sources of water upon which natural resources are dependent.

MFLs and Water Shortage plan

Currently, there are many tools within state law that protect water resources and the natural systems that depend on them. One such tool is that of Minimum Flows and Levels (MFLs) found within § 373.042, F.S., which requires the establishment of the limit at which further withdrawals from a resource will be significantly harmful. This must be thought of a "floor" below which significant harm occurs to the resource. This is not a restorative standard. To date MFLs have been completed for Lake Okeechobee, the Everglades and the Northern Biscayne Aquifer. The statute also requires the development of prevention and recovery strategies for areas where MFLs cannot be met. These prevention and recovery strategies largely consist of CERP projects, yet to be constructed. (Cite language from 042 here). Other estuarine resources are the focus of upcoming MFL rulemaking efforts such as the St. Lucie River, the Caloosahatchee River, Biscayne Bay and Florida Bay. Currently rule development is proceeding on the Loxahatchee River MFL.

Water shortage declarations are promulgated under 373.246 to prevent serious harm to water resources, defined as long term, irreversible or permanent harm to a water resource. The various phases are used to declare different stages of water use cutbacks to prevent serious harm from occurring. The attempt is to "share the pain" of decreasing water supplies between users, as well as the environment.

Principles and Issues for the Pre-CERP Baseline

The starting point for determining how to make a reservation and what to base it on is found in establishing the Pre-CERP baseline. The need to develop a model of the 2000 existing condition to show how the system is operating and the quantity, quality, timing, and distribution of water it is delivering is grounded in state and federal law. The pre-CERP baseline will only be as accurate as the assumptions used to develop the model.

Recommendation: The SFWMD, the Corps and Interior should jointly establish timetables and processes to resolve conflicts over modeling assumptions for the pre-CERP baseline through and open and accessible public process.

Recommendation: The SFWMD and the Corps should update the conditions assumed for the 1999 Restudy and the 1995 base of the Lower East Coast Regional Water Supply Plan (LECRWSP) to reflect December 2000 conditions in order to establish a baseline.

Projects that were authorized, yet remain unconstructed should be included in the Pre-CERP baseline. The Savings Clause of WRDA only applies to changes in water sources as a result of implementation of the CERP. The Savings Clause does not apply to projects outside or authorized before CERP. On the issue of the maintenance of flood

protection, implementation of the CERP, shall not reduce levels of service for flood protection. Specifically, one condition (ii) states that the levels shall not be reduced beyond those in accordance with applicable law. Levels of service for flood protection must be consistent with those authorized by law.

Recommendation: Conditions that are the result of temporary, experimental and emergency operations, such as ISOP, should not be covered under the Saving Clause. Operations in accordance with applicable law should control.

The variable nature of operations in the Southern Everglades poses a problem for implementation of the Savings Clause for Everglades National Park. It is therefore appropriate that the pre-CERP baseline be updated for Savings Clause purposes once the Modified Water Deliveries and the C-111 Projects are completed.

Recommendation: The pre-CERP baseline should include, for Savings Clause purposes, conditions anticipated to result from the completion oft Modified Water Deliveries and the C-111 Projects.

While it is logical to identify primary, secondary and tertiary sources of water, it is not logical to provide the same rights to each of those sources. For example, if a user is dependent on Lake Okeechobee under a 1 in 10-year drought scenario, what legal right, if any, should vest upon that source? This must be clearly resolved in order to accomplish the goals of the CERP. If not the restoration ecosystem and health of the resource will continue to be a secondary consideration. A user cannot lay the same legal claim to a source they are less dependent upon.

Generally permits allocate a quantity much larger than that actually needed, and used and using the amount the permit was actually allocated will tend to overestimate and legally vest a larger entitlement than that actually used. If more accurate methods of investing agricultural irrigation are being explored, it would only stand to reason that the most accurate system of accounting should be employed to calculate human use as of December 2000. The same should hold true for actual acreage planted versus permitted acreage. The most accurate calculation of use is that actually planted in the ground to estimate supplemental irrigation demand.

Recommendation: "Reasonable needs" identified on page 14, line 15 must refer to an amount actually used.

Changes to operational guidelines outside of CERP must be addressed. Vesting rights in quantities of water that shall be subject to change through non-rule efforts such as Supply Side Management sets up a potential future conflict. When Supply Side Management, a non-CERP initiative, is implemented during a drought and becomes the policy guiding operations during extreme events, user groups cannot use the Savings Clause to oppose operating the system in that way.

Recommendation: These operations guidelines should be formally adopted as rules, so

they actually become applicable law rather than a perceived consistency or inconsistency with the law.

In many instances, current deliveries to estuarine bodies such as Florida Bay and Biscayne Bay are based on flood protection needs for urban and agricultural areas, not the ecosystem needs. Some of these uses are not specifically "beneficial" for that water body, yet the quantity is delivered regardless. Beneficial deliveries must be defined, and the needs of the ecosystems, including estuaries, on which fish and wildlife depend, must be determined. It is possible that one aspect of a delivery, such as its quantity, may be beneficial to fish and wildlife, while other aspects, such as quality, timing, and distribution may not be. This is especially true for point-source discharges from urban canals into estuarine systems.

Recommendation: Deliveries for fish and wildlife must be based on the needs of the ecosystems upon which species depend.

Existing Legal Sources

The definition that is contained with in the document for existing legal sources is on page 15. It states:

> The quantity of water available from all locations of which there was a dependence as of December 2000, consistent with Federal and State law for: 1) urban and agricultural existing legal uses, including those uses exempt from permitting requirements; 2) non-consumptive uses, including regional surface water deliveries and groundwater seepage for resource protection; 3) meeting the entitlement of the Seminole Tribe of Florida; 4) the Miccosukee Tribe; 5) federal and state requirements for Everglades National Park; and 6) protection of fish and wildlife.

We agree with many stakeholders that the term dependence is vague. Would this include any dependence whatsoever, whether that source was a primary, secondary or tertiary source? If so, it would seem the scope of dependence has been radically expanded. This dependence must be based on a scientific standard, a period of record. We agree with alternatively offered language of other groups that the term "dependence" should be dropped from the definition and the quantity of water should be gauged by a reasonable-beneficial use or for the protection of fish and wildlife standard.

Recommendation: The definition of "existing legal source" should be amended as follows:

> The quantity of water ~~available from all locations of which there was a dependence as of~~ delivered by the C&SF project that was utilized for reasonable-beneficial uses or for protection of fish and wildlife as of December 2000, based on a 36 year period of record for rainfall, consistent with Federal and State law for: 1) urban and agricultural existing legal uses, including those uses exempt from permitting requirements; 2) non-consumptive uses, including regional surface water deliveries and groundwater seepage for resource protection; 3) meeting the entitlement of the Seminole Tribe of Florida; 4) the Miccosukee

Tribe; 5) federal and state requirements for Everglades National Park; and 6) protection of fish and wildlife.

Spatial Identification of Existing Legal Source User Basins

Recommendation: The Table on page 16 must include the estuarine resources. Biscayne Bay, Florida Bay, Loxahatchee River and Slough, St. Lucie estuary (as opposed to the agricultural basin), and Caloosahatchee (as opposed to agricultural basin), Lake Worth Lagoon must be included in the Environmental basins section.

Method for Quantifying Existing Legal Sources through the Pre-CERP Baseline

While a water budget should be completed for the existing legal source basins, without the full array of those basins included, the water budget will not capture all environmental demands. The exclusion of regulatory discharges is inappropriate since many estuarine areas, such as Biscayne Bay, rely heavily on regulatory discharges. The statement that regulatory discharges "have not been historically depended upon" is poor justification and confuses the issue. Since regulatory releases often result from undesirable patterns and variations in rainfall, it could be argued that rainfall is not a "dependable" source of water and should be excluded (as evidenced by the many periods of water shortages or flooding). If "dependability" is a factor to be considered when quantifying existing legal sources, a clear definition and method for determining dependability need to be provided. Further, the proposal to eliminate regulatory discharges as existing legal sources appears to conflict with statements in the introductory paragraph of this section. It states, "hydropatterns of the existing environmental systems are reflective of the operational policies currently in place for the region as defined by regulation schedules, conveyance limitations, water control structure hydraulics for flood protection, water supply and environmental deliveries." This acknowledges that conditions in many natural areas result from operational policies – including regulatory discharges – which were in place as of December 2000. Accordingly, regulatory discharges should be included when quantifying existing legal sources, to the extent that they provided benefits to fish and wildlife.

Recommendation: Before regulatory discharges are completely dismissed, the benefits to receiving bodies must be included in the Environmental basins section. Any unintended but reasonable benefits should be included in this analysis.

Proposed Procedure for Identifying Impacts to the Existing Legal Sources through PIR Development

There two potential problems to be addressed during the PIR phase. The project may not meet its expected performance, or it may not make up for the quantity and quality of water transferred or eliminated. If the design is deemed unacceptable, a process must be established to develop further iterations of the design, including a range of alternatives and a peer review process. This process, however, is outside the scope of this document and should be developed by the RECOVER team. Finally, if there is an elimination or transfer, a revised existing legal source user basin volume probability curve must be used for subsequent PIRs.

Recommendation: The document should specify how this would be coordinated.

Quantification of Regional Water Availability for Water Supply Service Areas

We support the concept of Regional Water Availability (RWA). Defining existing allocations for consumptive use permitting and non-consumptive uses for resource protection will give a clearer picture upon which decisions are made to issue consumptive use permits. Basing the RWA rule upon the pre-CERP baseline will allow for better decision making on future permits. Updating the rule will provide for future clarity, as well in consumptive use permitting and issuance of renewals.

Recommendation: How the quantity determinations are made and conflicts resolved regarding the RWA (including existing and future demands for consumptive users), resource protection and environmental deliveries must be clearly determined, and should involve all of the agencies and stakeholders involved in the CERP through an open and accessible public process.

Recommendation: The relationship between the establishment of the RWA rule and the individual project reservations, building upon the pre-CERP reservation, should be clarified.

Implementation of RWA through Consumptive Use Permitting rules

While we agree with the establishment of an accounting procedure to be implemented through the permit application review process, some concerns exist about the current proposal of doing so. We applaud the accountability of such a permitting system. In addition, it is important that the use of alternative sources be a primary consideration to degree it would offset demands on the regional system.

Number 3 on page 20 states; "The object is to not exceed the volume in the rule." This should not only be the object, but the standard. Audubon would not support exceeding the rule under any circumstances.

Recommendation: It should also be made clear that permits will not be issued conditioned on future projects.

Along these same lines on page 21, we agree that the RWA rule should define what actions are to be taken in the event that demands of a basin equal or exceed the volume of the regional water available to the basin by rule.

Recommendation: If issuance of a permit is likely to cause an exceedance of the volume in the rule, the permit must be denied. It will become difficult, but the rule will have to act as an absolute in some instances thus requiring the denial of a permit until projects come on line to make water available, such as additional CERP storage projects, and even then, only after the project is being operated consistent with the reservation for the natural system.

Establishing a Pre-CERP Reservation for the Environment

The development of a rainfall driven schedule pursuant to the Lower East Coast Regional Water Supply Plan is very important. This will improve the timing, flow and distribution of water for the enhancement and protection of fish, wildlife and habitat. We are concerned about the language on page 21, "existing legal source protection may constrain, to some extent, the full implementation of rainfall driven schedules as originally envisioned in the LEC plan". Nowhere can we find this constraint grounded in applicable federal or state law. Of further concern is the next sentence, stating "Based on the current definition of existing legal sources, these proposed rainfall driven volumes of water must not redistribute the volumes associated with other existing legal source user basins from which there was a dependence on December 2000, but may redistribute volumes identified for the natural systems". The final part of the sentence could be read to mean that the redistribution would only occur relevant to volumes for the natural system.

Recommendation: This redistribution should not be solely limited to only portions of the natural system. It could set up competing needs with in the system itself. Also, no such constraint exists in the law. As permits expire, they must be reevaluated under the public interest test to ensure that the use is not contrary to that interest. Reservations fit within the state's authority to constrain the use of water from consumptive use permittees, but a similar constraint does not, nor should it, exist akin to curtailing the development of a rainfall driven schedule based on an existing legal source "entitlement".

Saving Clause protection is only applicable to the implementation of the CERP. Establishing a pre-CERP baseline is by definition, outside the CERP and cannot qualify for savings Clause, or existing legal source protection. The development of a rainfall driven schedule is not something mandated as a part of CERP implementation. It is an effort to better define timing, flow and distribution of water as a precursor to a pre-CERP reservation as contemplated by the LEC plan. Attaching Savings Clause protection to such an endeavor approaches the slippery slope of constraining the District's authority by applying the Savings Clause to situations that do not result in the loss of water from implementing the CERP.

Recommendation: The Savings Clause analysis should only be applied to implementation of the CERP. Running every District planning or modeling exercise through a Savings Clause analysis will unnecessarily restrict the state's authority.

We support the concept of Federal approval for the rainfall driven deliveries to protect fish and wildlife. Once Federal approval is achieved, the portion of the rainfall driven deliveries will be reserved from use through state rule. This is probably the most important and supported aspect of this reservations paper. It is critical for the natural system to receive some minimal level of legal protection similar to that of the various Tribal entitlements or legally permitted protection. This is a way to achieve some small level of parity for the natural system, which only currently is only entitled to protection from the result of implementation of the CERP through the Savings Clause. Additionally, establishment of a pre-CERP reservation for the natural system will be essential to effective application of the Savings Clause for the natural system. The

mechanism to protect against consumptive use permitting, and other permitting, found in § 373.223(4) should be employed to provide this base level of protection to protect fish and wildlife. It is logical that some sort of starting point be established as a precursor for reservations from projects to be implemented in the future. Without such basic protection, many natural system advocates will be forced into advocating for individual reservations to protect natural areas now because of increasing concern over availability of water and overallocations to permitted uses. A holistic approach to establishing a system-wide or regional pre-CERP reservations will be a significantly more efficient way to protect the natural system Audubon considers this to an important precursor to implementing a reservations process for CERP implementation.

Quantification of Additional Water for Natural Systems and Human Uses Made Available by CERP

We support of quantifying benefits on a system-wide basis as well as a project-by-project basis. In certain circumstances it may be appropriate to only identify benefits or water to be reserved for the natural system and the effects of that on a project-level basis, such as Southern Golden Gate Estates or the Loxahatchee River. This is the only way the true benefits will be able to be identified and quantified.

Problematic in this section though, contained within lines 40-42, is the variance of project performance after construction. The section states, "quantification and accounting of water needed to be reserved, as reflected in the PIR, could vary from the actual project performance after project construction and during the operation phase". There is no real process defined on how to deal with the shortfall. If after the further iterations of design, described on page 18, lines 16-17, and optimization of operations, page 23, lines 1-2, the anticipated benefits are not achieved the natural system must still get the intended benefit of that project. Is there an across the board reduction in benefits to all recipients of water? Audubon would not support an approach that reduced the benefits to the natural system. While alternative water supplies can be developed to make up for shortfalls in urban and agricultural water supplies, this is not an option for the natural system.

Protection of Additional Water for Natural Systems and Human Uses Made Available by CERP

This section is important to the planning of an inevitability of CERP implementation, what if a project does not produce the anticipated amount of water it is supposed to produce? While it makes sense that the PIR address quantities of water for future human supply, this must not become equitable to the requirements in WRDA 2000, that a reservation be made for the natural system. § 601(4)(A)(iii)(V). Water supply performance measures are not the same level of protection to be afforded the natural system.

Only through actual operation of the facility, will we be able to gain enough knowledge to accurately base a reservations rule. Source shifting issues should also be resolved within the PIR stage, or when the reservations rule is crafted.

Of concern in this section, page 23, lines 28-36, changes between the PIR and final

operations "may affect the amount of water initially reserved by rule for the natural system". This change may also affect water available for consumptive uses. The response to this uncertainty is that "the reservation should be conditioned upon reevaluating performance of the facility once constructed and operational".

Recommendation: This disparity must be resolved, and priority must be given to restoration. Simply relying on the RECOVER and adaptive assessment processes to rectify these shortfalls is not sufficient.

Recommendation: We recognize that making an initial estimate of anticipated benefits of CERP may be necessary of planning purpose, however, such estimate should be based upon the "yellow book" estimates and the initial system-wide estimate of 80% of the water for natural systems and 20% for agricultural and urban water supply, or updated numbers from PIRs.

Relationship of Quantification of Water to be Reserved and Operating Manuals

Page 24, lines 41 through the top of page 25, addresses revising the reservations rule to reflect the difference between draft project operating manuals in the PIRs and the completed projects with operations. As with the previous section, while scheduling and performance differences may necessitate a revision to the reservations rule, there is no certainty or process attached to the revision in this paper.

Recommendation: Such a process should be developed with the involvement of all agencies involved in CERP, through an open public process, and must be consistent with the WRDA Act, the President/Governor Agreement, the Programmatic Regulations for the implementation of CERP, and the project cooperation agreement (PCA) for individual projects. Mechanisms to resolve conflicts over how to resolve these issues must be developed.

BROWARD COUNTY
FLORIDA
PUBLIC WORKS DEPARTMENT
Office of Environmental Services
2555 W. Copans Road, Pompano Beach, Florida 33069 • 954-831-0705 • FAX 954-831-0708

September 12, 2002

Sherry Scott, P.G., Water Supply Coordinator
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406-3089

Subject: Comments on June 25, 2002 Reservations White Paper

Dear Ms. Scott:

Thank you for the opportunity to comment on the South Florida Water Management District's (SFWMD) paper entitled *"Reservations of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State Law."* Broward County staff recognizes the importance of the policies proposed in the paper and commends the SFWMD staff for their comprehensive analysis of the issues. Broward County staff has been working with the Broward County Water Advisory Board and its Technical Advisory Committee to develop a paper which represents a county-wide position on general CERP issues. A copy of this paper entitled *"The Future of Broward County's Urban Water Supplies"* is attached for your review and consideration. While this paper is, by intent, general in nature, it provides a county-wide vision of how to interface with the CERP and how to address associated problems.

Much of what you have presented in the Reservations White Paper is consistent with the County's position and we generally agree with the guiding principles therein. However, we are concerned that implementation of the reservations may have unintended impacts on the availability of water for the Lower East Coast and Broward County in particular. This has become especially true as implementation of Aquifer Storage and Recovery has become significantly delayed, leaving Broward County vulnerable to water shortages in future years. Specific issues in the White Paper which may affect Broward's ability to meet future water supply demands are summarized below.

Sherry Scott, P.G.
SFWMD
September 12, 2002

☐ **Initial Reservations set aside pre-CERP water, reducing the amount of water available for users.** The SFWMD's reservation strategy sets aside pre-project or "pre-CERP" water by allocating estimated volumes of water expected to be produced by a project prior to its completion. This "initial" allocation and reservation may further exacerbate timing issues for users whose allocations may be constrained by the establishment of 2000 pre-CERP Baseline, Group B consumptive use permitting regulations and by the policies proposed in the current draft of the federal programmatic regulations for CERP. The potential for increased permitting and policy restrictions may make it more difficult for users to obtain increased allocations and may require us to develop alternative supplies to meet increased demands.

Broward County is committed to supporting the CERP and Lower East Coast Regional Water Supply Plan (LECRWSP). From their inception, these plans proposed to meet present and future water resource needs of the urban areas. However, we recognize that serious delays associated with ASR have created a timing issue with regard to the ability of these plans to meet Broward County's needs as they occur. Broward County expects that, despite any limitations placed on water availability as a result of ASR delays, water reservations or any other regulatory processes, the SFWMD will pursue and support the development and funding of water resource development projects to ensure the availability of sufficient water for all existing and future reasonable and beneficial uses. To comply with existing legislative and program planning responsibilities, it is important that the reservations process consider a strategy to meet both existing and future urban water resource demands. It is also requested that the Group B Rules be developed concurrent with the reservations strategy to ensure that impacts to users are adequately considered.

☐ **The definition of existing legal sources excludes sources of vital importance to Broward County.** The SFWMD defines existing legal sources as local rainfall, storage, delivered quantities, and supplies for resource protection such as regional deliveries for saltwater intrusion, wetland protection and canal recharge. Seepage, which is a large and important primary source of water for the LEC, has not been included and should be added.

Regional water discharged to tide, which is currently available to us as an existing legal source, is also not included. Broward County's Permit No. 06-00837 allows the County to pump water in unlimited amounts from the Hillsboro Canal when the District is releasing water to tide from the G-56 Deerfield Locks salinity structure. Please clarify Broward's future expectation to utilize this source, which is clearly specified by the permit.

Sherry Scott, P.G.
SFWMD
September 12, 2002

Broward County's Office of Environmental Services and Department of Planning and Environmental Protection are working very hard to ensure the future availability of the County's future urban water supplies. The potential for cumulative impacts of ASR delays combined with the SFWMD Reservations Strategy and the proposed revisions to the myriad of other state and federal regulations under review may result in significant impacts to water availability for the Lower East Coast and Broward County in particular.
Broward County is committed to working with the SFWMD to find a balanced and equitable approach to meeting the needs of the County while achieving the other goals of CERP. We look forward to working with you on this important initiative and other issues in the future. Should you have any questions, please don't hesitate to contact us.

Sincerely,

Roy Reynolds, P.E., Director
Water Management Division
Office of Environmental Services

cc: Tony Hui, OES
Steve Somerville, DPEP
Ken Ammon, SFWMD
Pamela Brooks-Thomas, SFWMD

Fax To: Kenneth G. Ammon, P.E.
From: Kurt G Chandler, Bureau of Indian Affairs /Eastern Region Environmental Scientist
Subject: Draft: Reservations of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State Law.

Comments: James Harriman is no longer working for the Bureau of Indian Affairs. I have been assigned to the Task Force but have not been able to make any of the meetings to date. With additional staff I hope to participate in the Task Force meetings. We are in the process of hiring a hydrologist, which I expect to participate in the Working Group meetings. In general, I am confident that your working with the Seminole and Miccosukee tribes on this project will keep the issues important to the BIA in the forefront. Unfortunately, I haven't had a great deal of time to focus on this project but these are my general comments:

(1) Your overuse of acronyms adds confusion. The overuse of acronyms makes it read as poorly as a military document, yet you don't have a list that explains them like the military does. If you insist on using them add a list that explains them so the reader doesn't have to re-read everything a dozen times. I first encounter SFWMD on page 8. I assume that is South Florida Water Management District but who can be sure because it isn't explained before it was used.

(2) On page 19 on the third paragraph it indicates that you will select a 10-year drought year from with the 36 year study period to base consumptive use permitting criteria. The language is not clear whether you are using the drought criteria as a basis for discharge permits or in allotting a minimum quantity of water to various consumers for consumption. In dealing with discharges into water systems there is a move to change from the common 7Q10 to 3Q20 in order to assure adequate dilution in the worst-case scenario. In order to assure your water supply remains clean you may wish to change to this 20-year drought criteria. If you are using the drought level as a basis for determining the minimum water allotments, how would you divide the water when the water available is less than the 10-year drought level? The 20-year drought level is a safer level to use in this case also. Some additional explanation would add clarity.

Please keep me informed of any upcoming meetings.

For further information you may contact me at:

Kurt G. Chandler
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E-mail: kurtchandler@bia.gov except that e-mail not currently available.

August 26, 2002

The Honorable Trudi Williams, Chairman
South Florida Water Management District
3301 Gun Club Road, Mail Stop 4420
West Palm Beach, Florida 33416

RE: Draft SFWMD white paper on Reservations of Water for the Environment

Dear Chairman Williams:

The Estero Bay Agency on Bay Management (ABM) was established in accordance with the settlement agreement for the completion of the permitting for Florida Gulf Coast University. The ABM membership consists of, but is not limited to, delegates from local chambers of commerce, Citizen and Civic Associations, Lee County SFWMD, FDEP, FG&FWFC, FGCU, SWFRPC, commercial and recreational fishing interests, environmental and conservation organizations, the Responsible Growth Management Coalition, the Town of Fort Myers Beach, City of Sanibel, scientists, affected property owners, and the land development community. The ABM is a non-regulatory, advisory body whose directive is to make recommendations for the management of Estero Bay and its watershed.

The ABM reviewed the draft white paper entitled "Reservations of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State Law." We request that the white paper be modified to include the Estero Bay, the Caloosahatchee estuary, and the Corkscrew Regional Ecosystem Watershed (CREW) as legal source user basins for environmental purposes. We expect that Figure 3 and its associated table on page 16 would be amended for the final paper to include the Estero Bay, the Caloosahatchee estuary, and the Corkscrew Regional Ecosystem Watershed (CREW). Following adoption of the white paper, we also request that a statutory or pre-CERP reservation be developed for the Estero Bay, for the Caloosahatchee estuary, and for the Corkscrew Regional Ecosystem Watershed (CREW).

If you have any questions, please contact me at beeverjw@aol.com.

Sincerely,

James W. Beever III

James W. Beever III, Chair
Estero Bay Agency on Bay Management

Cc: SFWMD Governing Board and Executive Director

Florida Department of Agriculture and Consumer Services
CHARLES H. BRONSON, Commissioner
The Capitol • Tallahassee, FL 32399-0800

Please Respond to:

Office of Agricultural Water Policy
1203 Governor's Square Boulevard, Suite 200
Tallahassee, Florida 32301

August 19, 2002

Kenneth G. Ammon, P.E.
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

Dear Mr. Ammon:

Thank you for the opportunity to review and comment on the draft white paper, *Reservations of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State Law.* We recognize the substantial effort by District staff to produce this initial draft and appreciate being able to provide input while it is still under development. Our intent is to monitor the progress of this continuing effort and provide input through participation in the Water Resources Advisory Commission and the Working Group. The following comments are offered to identify issues of general concern and we anticipate providing more specific comments as subsequent drafts are made available.

Water reservations are a matter of state law. This was acknowledged, and affirmed, in WRDA 2000 and the current draft of the Programmatic Regulations clearly defers to the jurisdiction of Florida law in reserving or allocating water. It is a matter of concern that the draft appears to suggest that water reservations must be consistent with both state and federal law. Implementing water reservations in a manner that is consistent with the District's commitments to the federal government as local sponsor for CERP is not necessarily an unreasonable objective. However, matters of state law should not be constrained nor unduly influenced by federal law in order to facilitate meeting those responsibilities. Put simply, water reservations ought to be implemented in the same manner as they would be elsewhere in the state. We suggest that an effort be made to more clearly distinguish between the legal requirements of Florida law for water reservations and the implications that those requirements may have for matters of federal law.

We also have general concerns related to the issue of "existing legal sources," specifically the exclusion of all regulatory discharges to tide. The rationale for this is that "...these discharges have not been historically depended upon by consumptive uses or the natural system. Additionally, these regulatory discharges are the main focus for capture and redistribution as part of the CERP program" (*Initial Draft*, page 17). This seems to imply that because such discharges were not depended upon, none of the water discharged to tide was available to existing legal users. It is unclear whether a further implication is that none of this water will be available unless made available by a completed CERP project component. If so, it appears to be a de facto reservation of all the water currently discharged to tide. We suggest that clarification of this issue is necessary. We also recommend quantification of the discharges to tide, including identification of 1) the quantity of water that will be "captured" by CERP, 2) the quantity of water that currently provides non-consumptive or natural system benefits, and 3) the quantity remaining.

District water use rules, the "B" list rules, are currently under development and proposed for adoption by December 2002. Several of these rules are integral to the implementation of water reservations and assurances, and ought to be developed concurrently with the broader policies addressed in the initial draft. We suggest more detailed discussion of these rules than is in the current draft and also that the rule adoption schedule be coordinated with the schedule for developing the broader policies related to reserving water for the natural system and providing assurances for existing legal users.

Thank you again for the opportunity to provide these comments. We look forward to continuing to work with you on these issues.

Sincerely,

CHARLES H. BRONSON
COMMISSIONER OF AGRICULTURE

for Charles C. Aller, Director
Office of Agricultural Water Policy

CCA/aet

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Jeb Bush
Governor

David B. Struhs
Secretary

August 19, 2002

Ken Ammon, Director
Water Supply Department
South Florida Water Management District
P.O. Box 24680
West Palm Beach, FL 33416-4680

Dear Ken:

We appreciate the opportunity to review the June 25, 2002 draft "Reservations of Water for the Environment and Assurances for Existing Legal Sources Consistent with State and Federal Law." The document is a sound foundation for the process the District will use to meet the state and federal requirements related to implementing CERP. Establishing reservations on the scale proposed in CERP represents a daunting task, but the District is to be commended for the approach outlined in the draft document. There are many uncertainties associated with this effort, but the document provides enough flexibility to allow for changes as the District begins to actually implement the procedures. We do have some recommendations for improvement.

Relationship between Reservation and Drought Level

The document should make it clear that the water reserved for the natural system will be protected during water shortages (except in extreme circumstances). At present, Figures 1 and 2 can be interpreted to mean that reservations will not be protected during drought conditions more severe than a 1-in-10 drought event. The current version of Figure 1 shows that the natural system receives no additional benefit from a reservation of water beyond a 1-in-10 year drought event, until the year 2050, when all of CERP projects are implemented. This portion of the graph should be modified to show some incremental benefit to the natural systems during drought events as CERP projects are implemented. After all, it is during the droughts that it is most critical to "get the water right" to the natural systems.

We recognize that Figures 1 and 2 are conceptual, not quantitative. Nonetheless, in Figure 1, it appears that perhaps the Environmental Demand curve is too steep in the drought region when compared to the Human Supply Curve. Therefore, the graph makes it appear as though the natural system suffers more "adversity" than is experienced in public supply. We suggest revising the slope of the environmental demand curve so that it does not decline so steeply. It

would also seem that the human supply curves should begin to decline as a result of Phase 3 restrictions being implemented. Additionally, Figure 1 could benefit from some explanatory text within the main document.

In Figure 2, it appears that reservations terminate during conditions more severe than a 1-in-10 year drought event. We suggest revising this figure so that it shows that reservations will be implemented during all hydrological conditions.

Quantifying Existing Legal Sources

The document should make a very careful distinction between 1) protecting the amount of water that existing users derive from a source and 2) the entire volume of water in a source. It is appropriate for the District to quantify the amount of water used by or permitted to existing legal users for a specific source. However, it is not appropriate to quantify the entire volume of water that could be available to users from an existing legal source and then designate that entire volume of water as the existing legal source, which must be protected by CERP. From the information presented on pp. 15-19, we are not sure if the District is proposing to protect only the volume of water in existing use (or permits) or whether the district is proposing to protect the entire volume that potentially could be used. Therefore, we recommend that the District explicitly indicate that the amount of water identified as an existing legal source will not be the entire volume of the source basin, but the volume used by (or permitted to) the existing users as of December 2000.

We also recommend that the document discuss policies affecting any increased allocations that have occurred after December 2000. Has the district increased the amount of water allocated to the different users since December 2000? If allocations have increased since then, do these users have the same assurances provided in WRDA? What happens to the allocations that have increased from December 2000 until a new source comes on-line? Will these increases be included in the determination of whether the project is operating according to design specifications? Does the new source have to meet these increased allocations, before users can be switched to it?

Natural Systems

We have some concerns about the definition for "natural systems." As proposed in the draft paper, "natural systems" are limited only to those areas in public (state or federal) ownership. Although this is the proposed definition also used in the programmatic regulations, our concern is that this definition may be too limited. It could prevent the District from establishing a reservation for a significant natural resource that may not be in public ownership. We urge the District to carefully consider the implications of using such a restricted definition for "natural systems." What would happen if it were discovered during project design that the hydrology of a non-publicly owned natural feature needs to be protected or enhanced by a project?

Documenting the Baseline

As the draft notes, it is critical that the District carefully document all the assumptions and methodologies used to develop the baseline condition. Careful documentation of this effort will be a valuable tool for the adaptive management that will be needed as the CERP projects are completed many years from now. This paper could describe in greater detail just how it is proposed to define and keep a permanent and accessible record of the baseline condition.

Additional specific editorial comments are attached. Please continue to keep us informed of the District's progress toward implementing the concepts outlined in the draft paper. If you have any questions, please contact Kathleen Greenwood or me at (850) 488-0784.

Sincerely,

Janet G. Llewellyn
Deputy Director
Division of Water Resource Management

JGL/kpg
Attachment
cc: Ernie Barnett, DEP
Melissa Meeker, DEP, SED
Rick Cantrell, DEP, SFD
Tom Swihart, DEP
John Outland, DEP
Jose Calas, DEP, SED
Kathleen P. Greenwood, DEP
Greg Knecht, DEP
Debbie Scerno, DEP
Mellini Sloan, DEP
Sherry Scott, SFWMD

Specific Comments

Page 9, line 16. Incorrect reference to MFL adoption date, the District adopted MFLs in 2001 not 2000.

Page 10, line 35. Sentence does not make sense as written. It appears that the word "rule" should be replaced with "use."

Page 13, line 45; Page 15, line 30; Page 42, line 15. Add "pre-CERP baseline" before "surface storage". This will clarify that any additional surface storage constructed under CERP will be counted as new water and subject to reservations for the natural systems.

Page 17, line 13. Please provide a specific definition for regulatory discharges. This will affect the amount of water later perceived to have been created (new water) by CERP components.

Page 17, line 35. Should the word "source" be substituted for "project?"

Page 17, line 46. The word "have" should be deleted

Page 18, line 28. Item 4 includes the new term "existing legal source user basin." This appears to be a conglomeration of many terms previously described separately. If this is the correct term, please provide a definition.

Page 19, lines 7-9. The description of non-consumptive uses appears somewhat restrictive since it only refers to resource protection. Please consider adding ecosystem restoration to the sentence as follows: "...water available for non-consumptive uses for resource protection and ecosystem restoration."

Page 19, lines 17-19, and lines 31 - 33. At this point, it would be helpful to also note that any sources that may become available through time can only become available after the "sufficient reservations of water for the restoration are made under State law..." (see page 5, lines 40-44)

Page 20, lines 40-42. This sentence appears to imply that the permit applicant is the entity responsible for protecting water resource, which is beyond an individual applicants responsibility. Perhaps the sentence should be reworded "The SFWMD will ensure that non-consumptive uses of regional water are protected through specific conditions (such as salt-water intrusion prevention, isolated wetland protection, water conservation requirements etc) placed in consumptive use permits."

Page 21, Section D, and Page 23, Section E. These two sections form the main conclusions of the document and describe what will be involved in the final determination of "reservations for the natural system." The concepts presented here did not make sense until one reads Appendix D. Please consider adding some more of the information from Appendix D in these two sections.

Page 21, line 44. At the beginning of this section, it would be appropriate to reiterate the earlier discussion (page 5 lines 40-44) noting that any sources that may become available through time can only become available after the "sufficient reservations of water for the restoration are made under State law…"

Page 24, line 32. This section should include some explanation of the "next added increment." This is the first reference to the concept, and the reader is told it will be optimized.

Page 25, Table. Under Detailed Design, the Stage of Quantification of Water column should be "Refine Quantity to be reserved (if required)".

Figure 5, text underneath chart. The parenthetical text below "project reservations" does not make sense. Perhaps the text should read "may have separate system-wide reservations?"

Page 33, line 12. Replace "lined" with "legal."

Page 34, lines 13-17: This definition of "reservation of water for natural system" is accurate in referencing the provisions in section 373.223, F.S., (not 373.232) allowing for reservations protect fish and wildlife, but incomplete. The statute also allows reservations for the public health and safety.

Page 34, lines 22-27. "System-wide reservation account" is not used anywhere in the document and should be deleted from the definitions section.

Page 47, Appendix D, line 21. Delete the reference to consistency with the LEC Water Supply Plan. Although excess new water from a project may be allocated for consumptive use water supply, it should not be a requirement under CERP.

Page 48, lines 27-31. This list introduces the term "volume duration curve" yet the rest of the document refers to "volume probability curves." Please make the appropriate changes to use consistent terminology.

FLORIDA WILDLIFE FEDERATION

Affiliated With National Wildlife Federation

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August 15, 2002

Mr. Julio Fanjul
Lead Planner
South Florida Water Management District
PO Box 26480
West Palm Beach, FL 33416-4680

Dear Mr. Fanjul,

The Florida Wildlife Federation concurs with the points in the attached document made by our board member, Mr. Jack Moller, concerning water reservations for the natural ecosystems and their regulation in south Florida.

We urge you to include these concerns in developing District policy concerning water reservations.

Sincerely,

Manley Fuller

Manley K. Fuller, III
President

MFK/pp

Attachment

ATTACHMENT

RESERVATIONS OF WATER FOR THE ENVIRONMENT AND ASSURANCES FOR EXISTING LEGAL SOURCES CONSISTENT WITH THE FEDERAL AND STATE LAW

To: Julio Fanjul, SFWMD

From: L. Jack Moller, Water Resource Advisory Commissioner

The following are my thoughts, concerns and request for change on the above document. Please share these with appropriate staff so we can be given public responses at the next WRAC meeting, July 16. It would be good if staff could send me their thoughts and positions or corrections before this meeting.

Page 7 line 25; 'existing legal users' Is the natural system as well as the built system considered a legal user?

Page 7 line 28; 'the needs' does 'needs' include flood, flood being water that harms the uplands, hardwoods and willows of the Everglades including Everglades National Park, the WCAs, Big Cypress National Preserve, Ray Rottenberger and Holey Lands. For future reference when I say Everglades these are the areas I am speaking of.

Page 7 line 33; 'PIR' do all CERP projects require NEPA and PIRs to be completed before funding or only before the project's physical work can begin?

Page 8 line 43 and 44; These permitted users and domestic water users', what is the difference? Do both require a CUP?

Page 9 line 5; 'use permit applications', can someone or group apply for a CUP for the natural system or a part of the natural system?

Page 9 line 19; 'also proceeding' What about Ray Rottenberger and Holey Lands? Where are their MFLs.

Page 14 line 39; 'historic operational', what year does history begin?

Page 15 line 17, '6) protection of fish and wildlife', Where and who's fish and wildlife, Federal, State or Tribal?

Page 15 line 30, '2) groundwater from Biscayne aquifer; 3) surface water and groundwater seepage from the Water Conservation Areas;', Since the Biscayne aquifer is a surfical aquifer and a sole source aquifer and starts at the northern end of Water Conservation Area 3 are these, 2 and 3, not the same? If not why not? Basically aren't 2 and 3 the same water?

Page 14 line 39; 'historic operational', what years does history begin?

Page 15 line 17; '6) protection of fish and wildlife, Where and who's- see the earlier comment.

Page 15 line 30, '2) groundwater from Biscayne aquifer; 3) surface water and groundwater seepage from the Water Conservation Areas;', see earlier comments, I have the same concern here. Please explain?

Page 16 chart; It is my understanding that the Big Cypress National Preserve gets a considerable amount of water from the WCAs, via seepage under the L-28 and if this canal/levee were not in place the water would have naturally moved into the Preserve. Further water released from the WCAs to the south enter the Preserve south of US 41. Thus why is the Preserve isolated from the WCAs as source of dependence. Conversely when the WCAs are flooded and harmed so is the eastern part of the Preserve.

Also Ray Rotenberger is being rehydrated by an STA thus why is this water leaving this STA not being considered as a legal source 'existing' source of water as the STA is currently providing water to these naturally lands.

Page 19 line 3, 'RWA', where is the map showing these units? Are there transfers between RWA's? If so where is this found, which ones, how much per RWA? What are the reasons or causes for such an action?

Page 21 line 14; 'rainfall driven schedule', please define in clear terms that are measurable and definable? This has been a long standing issue with many.

Page 21 line 15; 'protection of fish, wildlife and vegetation, again who's, see earlier comments?

Page 22 line 28; 'would be judged' change to 'shall be judged.'

Page 22 line 31; 'operational rules should' change to 'shall'.

Page 22 line 33; 'rainfall conditions should' change to 'shall'.

Page 23 line 24; 'the rule should' change to the 'rule shall'.

Page 23 line 38; 'rule should' change to the 'rule shall'.

Page 23 line 43, 44, 45, 46; this statement implies the C-44 connector has been built or will be built. The statement further points out why this canal should not be built. That is because when the Indian River Lagoon does not need this water neither will Lake Okeechobee or the WCAs. As we all know when it rains in South Florida it rains all over South Florida and not merely in one sub-basin. Additionally, such a canal continues to make the Lake a reservoir for off site water drainage and storage. Further if water can be moved into the Lake via this new connector then water can be removed thereby causing a drain on the Lake when it needs water. This removal of water will be to supply water to the area drained by the connector and returning the water to the area that sent it to the Lake. Water should be held nearest to the location it falls.

Page 24; A general question about Reservations develops on page 24. Once a reservation is established can it be changed, how, by whom, and why?

Figure 3 Proposed Existing Legal Source Basins; I do not find any Collier or Lee basins on the chart except the Big Cypress. Further the figure leads the uniformed to think all the basins are separate and distinct basins with no enter play between them. We all know this is far from the case and the figure should be changed to show this cross over of water. It should also be changed to show the Picayune, Belle Meade, Fakahatchee, CREW, Camp Keys, Estro Bay drainage basin and all others. In more than one of these basins CERP money is going into them so we should not leave them out.

Page 32 lines 30 through 35; While Ray Rotenberger and Holey Lands are implied in the terms presented they should be listed because of their history and the many attempts by some interest to use as reservoirs and not as natural lands.

Page 36 lines 4 through 12; It is stated that 'Not later than 2 years after the date....' What happens if this date is not adhered to? In the next section there is a default clause. There should be one in this section of concern. No suggestions but open to them.

Page 42 lines 15 and 16; again items 2 and 3 are the same unless someone can convince me they are not; WCA water is Biscayne aquifer water.

Page 43 line 1, 'historic' what is the date for historic to start?

Line 6 chart Existing (2000) Condition - pre-CERP Baseline Assumptions. Why is Holey Lands not listed in the topography section? If none was done why not? It is listed in the Natural Area Land Cover (Vegetation) section.

Page 45, Western Basins and Big Cypress National Preserve; Why is there nothing listed by these units, where is the information on them, they are being worked on at this very moment?

These are my beginning concerns, suggestions and recommendations.

Thanks

Dear All

Attached are Lee County's staff comments and concerns about the draft Reservations paper. The County recognizes that it is extremely difficult to put into one paper the composite water policy that has brought about the current conditions, and guide allocations for the next half century. The County recognizes that it is also difficult to articulate concepts that have not been clearly stated or developed in the past, and understands the authors know that the participating public have to walk the path the authors have in order to understand the current situation. With this understanding that the developer of the County review may not yet fully understand the reservations paper (at least as intended by the authors) the attached comments are offered.

Akin or Janet, could you please forward these comments to Mr. Ammon or Ms. Scott. For some unexplained reason, I cannot succcessfully connect with the District's web site message center.

Thank you for your consideration of this matter.

Wayne E. Daltry
Director, Smart Growth Department
wdaltry@leegov.com
239-335-2840
239-335-2262 (fax)

Review of "Reservations of Water"

Background

The Everglades Restoration is the multi-billion, 50 year, recovery plan for critical environmental features in South Florida. A component of that plan is the Comprehensive Everglades Restoration Plan (CERP) which addresses various water supply strategies. In order to assure that the water supply plans provide water to the natural system, a protocol has been drafted which is the subject of this review. The protocol is "Reservations of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State Law."

Overall Comment

The concerns with this paper are simply-past management practices that adversely affect Lee County become institutionalized. The Caloosahatchee Estuary, a large component of the County economy and character, depends upon a management system that mimics natural conditions. Current operations that provide for extensive dewatering of the basin during the wet season--resulting in huge flows-- and the scarcity resulting in the dry season, are expected to continue until CERP projects are completed, and maybe not even then will relief be given. Further, environmental releases to the estuary seem to have been proposed to be eliminated. The conclusion seems to be that the estuary is not considered a water user nor is the river that supplies it (nor any other source that supplies it) considered a protected source for the estuary.

Specific Comments

P.6. The proviso of water supply for fish and wildlife. This consideration does not seem to preclude the estuaries. Consequently, the estuaries should not be precluded. (The protection for fish and wildlife is repeated in many places, and estuarine consideration should be included in those places also)

P.8. Text should be added: . *The public interest has a level of certainty for the natural system protection that is also associated with the issuance of permits.*

P.9 (Beginning line 9) Please add a statement of MFL for SW Florida and the Caloosahatchee, adopted in 2001.

P10. There is no mention of the role Surface Water Management Permits have played in creating the problems in reducing supply. These permits are also periodically updated. Should not there be some effort to have these permits provide for more storage?

P13. What does line 8-9 really mean? If, for example, the Caloosahatchee River flowed to the estuary in 1995 (the baseline under which all public information was presented) and didn't on the selected date, do we accept the management problem of 2000 as the planning condition?

Lines 24-29. If "projects" can be part of the baseline, then should not the MFL for the Caloosahatchee River be part of the baseline? Ditto lines 35-40.

Line 44-46. (Also 3-5, p 14) .How can local rainfall, surface storage, and runoff be a regional source of water? There is nothing left for local planning. This would further mean no flow to the estuary from the Caloosahatchee, based on statements elsewhere. Local rainfall etc should be a primary source to supply the local/regional water supply plans. (This comment about local rainfall is repeated in many places)

P14. L9-10. This is a difficult section to encompass. It seems to conflict with the In General paragraph of p 35, which is the quote from WRDA 2000

L17-21. Use is used. There are other unquantifiable reasons why permits aren't being used. (All other approvals may not have been given. Financing may not be available.) This would make water a "right" when it is a license. If a permit is issued and it cannot/has not been used, then the resource allocation should be returned to the public.

P 16 The table. The Caloosahatchee River watershed is defined as "agriculture". How was this classification determined? Is it determined by land mass, water use, or economic activity? Most water goes to estuary-or atmosphere; most economic activity occurs in the urban settings. Additionally, Where is the west coast in the listing of basins? (Not on map)

P 17 Line 4-10 What is the "environment" that is being defined? Then note Line 13 -16. What is a regulatory discharge? A pulse in wet season or a pulse in the dry season? Essentially, the question is that if average flow for dry season is 500 cfs, does the language mean we are to be considered using 500, or 0? (This links back to the issue--"what is regional water?")

P 18. Line 41-42. Provides for pre-CERP reservation as a step before CERP projects. We wish the Caloosahatchee River/estuary to have a pre-CERP reservation.

P 19/20. Please add language for the Caloosahatchee River and Lower West Coast WSPs.

P 21. Pt C. Only describes lower east coast. Needs language for Caloosahatchee river/lower west coast.

P 26. Need a pre-CERP reservation line shown on the chart.

P 28. Need western basins depicted

p 49. How do the environmental regions (lines 42-45) relate to upstream non-environmental regions? Is not the application of a Pre-CERP reservation necessary to ensure that the environmental regions maintain some semblance of their function?

MIAMI-DADE COUNTY, FLORIDA

MIAMI-DADE

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(305) 375-5311

August 26, 2002

Mr. Henry Dean
Executive Director
South Florida Water Management District
3301 Gun Club Run
West Palm Beach, FL

Dear Mr. Dean:

Thank you for the opportunity to provide preliminary comments on the Draft Reservation Rule White Paper prepared by your staff. They have performed an excellent analysis of the issues and there are many supportable policies embodied within the paper's proposals.

Several areas of concern, however, require further improvements to adequately prepare this complex set of subjects for the formal rule-making process. Florida Statutes 373.0831 requires the State to develop and fund water resource projects to insure the availability of sufficient water for all existing and future reasonable and beneficial uses under conditions up to and including a one-in-ten-year drought event. This mandate requires the South Florida Water Management District (SFWMD) to provide adequate water for the existing and future Miami-Dade Water and Sewer Department (MDWASD) system, under conditions up to and including a one-in-ten-year drought event. We believe that the need to establish a pre-Comprehensive Everglades Restoration Plan (CERP) baseline in no way means that the SFWMD may stop providing water needed to furnish the MDWASD system now or in the future. I hope that this is not the proposal contained within the draft Reservation White Paper and would suggest that language be added to the White Paper that clearly articulates the intent of the SFWMD to provide water for existing and future MDWASD customers under conditions up to and including a one-in-ten-year drought event

We do understand the need to define the baseline and existing legal sources, that is, so that the quantity and quality of water to be replaced by CERP water is defined. For this baseline, we strongly recommend that the physical installed capacity of the wellfield system should be utilized. As you know, MDWASD

multiple wellfields have been constructed using revenue bonds which require the County to pledge revenues from its ratepayers for the repayment of those bonds. Any baseline commitment less than the installed capacity would reduce MDWASD's ability to maximize the revenues collected from its ratepayers. Therefore, we suggest that the proposed definition of existing legal source allow for such financial commitments or the constructed capacity of the water system.

The draft Reservation Rule must address the protection of the water quality, as was expressed by Bill Brant at the July 15, 2002 Water Resources Advisory Commission meeting, for both wellfield and natural system requirements. MDWASD is currently completing a $50 million construction project to upgrade the treatment at its Hialeah/Preston Water Treatment Plant to comply with new federal rules regarding disinfection by-products. These treatment improvements were selected after full-scale pilot testing, and the water treatment plant was customized to match the organic content of the raw water at the Northwest Wellfield (NWWF). Any change to the water quality of the NWWF water would jeopardize the success of this project and could place Miami-Dade County in non-compliance with the federal act. We are aware of CERP plans to alter the source of water supply to the NWWF, but no information has been provided to address the County's concerns.

If the Lower East Coast Plan is no longer operative, it becomes difficult to support that plan's recommendation for establishment of a pre-CERP reservation of water for the Everglades Protection Area, particularly since Biscayne Bay is not proposed to enjoy such a reservation in the pre-CERP context. Excluding "regional water to tide" from the concept of "existing legal sources" would establish the pre-CERP baseline for Biscayne Bay as zero. Like Florida Bay, Biscayne Bay is a tidal estuary that historically received freshwater through surface and groundwater flow. Maintaining or restoring its natural function depends on a continuing source of clean freshwater that will provide stable water supply for fish and wildlife and will not degrade water quality. Aside from the obvious factual inaccuracy of a determination that freshwater discharges to the Bay are not an existing natural system requirement, this "without-project" condition is inconsistent with objectives for the Biscayne Bay Coastal Wetlands and Reuse CERP projects and the up-coming Reconnaissance Study for identifying additional water to benefit Biscayne Bay and Biscayne and Everglades National Parks. "Excess regional water to tide" is also the source of the seasonal allocation the County needs to charge our utility-operated Aquifer Storage and Recovery systems, which provide direct and indirect benefits to all users in times of scarcity. We therefore recommend that Biscayne Bay be designated as an additional legal source user basin, as Everglades, Florida Bay and Big Cypress have been.

As you know, we greatly appreciate the District's outstanding cooperation and assistance with the flooding situation in the C-4 basin and the agricultural areas of southern Miami-Dade County. Unfortunately, if a pre-CERP baseline for flood protection is established according to what actually existed on the date of Water Resources Development Act's enactment, that decision would effectively allow a reversal of critical improvements funded by FEMA, the District and ourselves, because they were not fully constructed and operational on that day. Miami-Dade's residents and elected officials seem unlikely to accept a scenario that would establish CERP's flood protection levels of service at pre-Hurricane Irene conditions. In any event, the South Florida Water Management Model is not able to address these issues, with its two mile by two mile scale. Until reliable sub-regional modeling and detailed topographical data east of the protective levee is available, this key aspect of CERP's purposes, under both WRDA and State law, is not properly addressed in the District's Reservation White Paper and elsewhere.

Finally, many people will not understand the concept of Volume Probability Curves. We would suggest using wet, normal and dry year benchmarks, as an alternative. In order to directly link this rule with other policy and regulatory efforts, perhaps it would be best to focus on 1 in 10 flooding years, "mean" or average years and a set of 1 in 10 drought years, for these purposes.

As always, we look forward to working with you and your staff on these and other significant issues in the future. Thank you for your attention to our concerns.

Sincerely,

Steve Shiver
County Manager

NATIONAL PARKS CONSERVATION ASSOCIATION®

Protecting Parks for Future Generations℠

September 6, 2002

Sherry Scott, P.G.
Water Policy Coordinator
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33146-4680

Comments on the Draft Reservations of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State Law

Dear Ms. Scott:

On behalf of the National Parks Conservation Association (NPCA) I thank you for this opportunity to comment on the draft white paper on Reservations of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State Law. NPCA is a national organization dedicated to protecting and enhancing America's National Park System for present and future generations. We have over 350,000 members nationwide and over 19,000 in the State of Florida.

We are pleased to see an introductory analysis of water reservations begun by this document, and believe that this is the first step toward a necessary discussion about the pre-Comprehensive Everglades Restoration Plan (CERP) baseline and the way in which water will be reserved during the implementation of the CERP. Unfortunately, we have grave concerns about the stated assurances for the continued delivery to the natural system of the quantity and quality of water necessary to sustain life within those areas. This document identifies some steps in addressing the pre-CERP needs of the natural system, but does not go far enough. Specifically, the Water Resources Development Act of 2000 (WRDA 2000) states that "as a result of implementation of the Plan, the Secretary [of the Army] and the non-Federal sponsor shall not eliminate or transfer the existing legal source of water including those for…(iv) water supply for Everglades National Park; or (v) water supply for fish and wildlife." Fish and wildlife within natural areas must be protected against losing the water they need, just as a consumptive use permitee is assured the same quantity and quality of water as existed prior to implementing the CERP. To accomplish this a pre-CERP baseline of water available for those natural systems needs to be developed, with water supplies assured for those existing users.

We urge you to develop and define the needs of the natural system in terms of environmental water demands. While we understand that historically the District has not officially supplied water to some estuaries for the purposes of maintaining fish and wildlife

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populations, the ability to do so has existed but has not often been exercised. We understand that undertaking such an initiative may be time consuming, but some effort toward understanding the needs of many receiving bodies is required to ensure that the latter section of the federal statute is complied with as well as maintaining an adequate supply of water to sustain such populations.

We support the selection of the rainfall delivery schedule to address the on-going discussion of the best water management for Everglades National Park and the Water Conservation Areas, but are concerned about the restraints unduly associated with their schedule. Section V., Part C. "Establishing a Pre-CERP Reservation of Water for the Environment" states that "considerations for the existing storage, conveyance and existing legal source constraints of the current system" will be the basis for the environmental delivery assumptions. These assumptions are to be based on "modeling analysis through the SFWMM" using estimates from the Natural System Model and the CERP environmental performance measures. The implementation of the rainfall driven schedule, originally developed through the Lower East Coast Regional Water Supply Plan (LECRWSP), is now intended to be included in the pre-CERP baseline and therefore will be covered under the savings clause of WRDA 2000 and other applicable laws. Therefore the rainfall-driven schedule for the natural system cannot be constrained by the existing legal sources because they estimate pre-CERP conditions, which are, by law, not constrained by existing legal sources. In fact, the District's definition of existing legal sources is also cause for concern; NPCA concurs with the comments and suggestions put forth by World Wildlife Fund, Natural Resources Defense Council and the Environmental and Land Use Law Center. We urge you to work closely with the Department of Interior to finalize the rainfall driven formula, as they are the primary clients of this schedule.

The implication of this section, as written, is that there will be conflict either between the urban uses and the natural areas, or within the natural areas. This document should be intended to resolve this conflict, but rather, the document compounds the problems. Furthermore, a pre-CERP baseline cannot incorporate CERP assumptions. If after modeling the baseline the results show that water resources have been over-allocated, then the onus for making up that shortfall should not be placed on the environment. In fact, any changes that must be incurred as a result of this analysis should not further degrade the natural system because it, too, is protected by the savings clause.

This section continues to contradict itself on the intention of the rainfall-driven schedule. The schedule is defined to "improve[] the timing, flow and distribution of water for the enhancement and protection of fish, wildlife and vegetation." This definition is consistent with WRDA 2000 and assists in developing pre-CERP conditions for one area of the natural system. Where the document errs is in its conclusion that after modeling analysis, "the portion of the rainfall driven deliveries which are projected to protect fish and wildlife will be reserved from use through state rule." What part of "the enhancement and protection of fish, wildlife and vegetation" in the first definition is not a part of "fish and wildlife" in this final comment? We urge you to refine this statement to ensure that the proper amount of water is reserved for the natural system. The entire concept of the rainfall-driven operations is to mimic a natural flow through this main stretch of the Everglades and must be maintained in its entirety for the protection of the fish and wildlife existing there.

This draft insufficiently acknowledges the identification of Existing Legal Source User Basins – particularly Section IV subsections C and D – and fails to adequately develop the water supply needs of receiving bodies of water such as Biscayne Bay. The WRDA 2000 specifically identifies Everglades National Park as a user, which this document positively expounds on and includes in the Table on page 16. WRDA 2000 also identifies "fish and wildlife" as a user protected under the savings clause, and therefore their water supply needs should be further developed in order to adequately comply with the federal law. While Everglades National Park and Florida Bay are identified as a Legal Source User Basin, Biscayne Bay, Biscayne National Park and Bay, St. Lucie and Caloosahatchee estuaries and others are not clearly identified. These other receiving bodies deserve a reservation of water under the pre-CERP baseline not only to be consistent with federal law, but also to protect and preserve the natural resources that are contained within them.

In part to resolve the issue of pre-CERP water supply for the environment, we must look at the amount of water that has been provided to those systems in the past. Unfortunately, this document proposes to entirely exclude all "regulatory discharges from the volume probability curves to define existing legal sources as these discharges have not been historically depended upon by consumptive uses or the natural system." While it is understood that CERP is designed to capture a significant portion of this particular water, some amount of it is necessary and is depended upon by the natural system. This statement should be refined and accompanied by a parallel analysis of the appropriate volume of freshwater that each receiving body is "dependent" upon for the survival of its requisite fish and wildlife. In Appendix C, "general principles" for "demand conditions" are defined such that "demands will be based on historic operational deliveries under federal regulation schedules and other historic deliveries for beneficial uses." Again, we argue that some amount of water within a regulatory discharge is beneficial to the environment; that amount should be determined in order to maintain the 2000 baseline condition for fish and wildlife in those receiving bodies. It is important to include such environmental water demands in the pre-CERP baseline to grant them their protection under the savings clause of WRDA 2000. Beneficial use is not clearly defined in this document and therefore provides no assurances that the natural system will be protected.

Until this time, the South Florida Water Management District (SFWMD) has not traditionally exercised their right to make reservations of water to the environment; it is clear that this needs to be done now. We are pleased to see that this is being contemplated for at least one area. The SFWMD has implemented water shortage plans and operations; however, these are not based on the amount of water that a natural system should get, but rather on the amount of water that it needs to have in order to do no harm. One such tool is the use of minimum flows and levels (MFLs), some of which are complete, and others are in development. Still, MFLs are a reference to water supply and do not provide the necessary amount of water required for fish and wildlife. A new approach should be taken to preserve the necessary water deliveries to Biscayne Bay, Florida Bay and other natural areas for the protection of fish and wildlife, however, that approach is not sufficiently addressed in this draft document.

This document discusses the important issue regarding the pre-CERP baseline of addressing the authorized, but unimplemented projects such as Modified Water Delivery and the C-111 projects. Together, these two projects increase and further refine water deliveries, in place

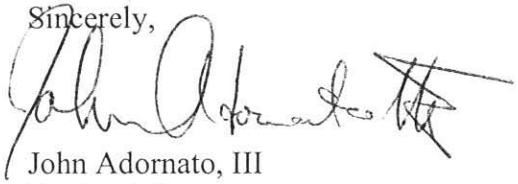
and time, for Everglades National Park, and were precursors to the entire CERP. NPCA understands the dilemma in that the current timeline for resolving the water reservations under these projects does not conform to the deadline for finalization of this Water Reservations document. We understand that operations for these projects, therefore, may not be included in the final version of the document. With that said, we do believe that a framework for addressing these projects in the future should be built now in order to avoid a battle over water rights. It is important to reiterate that the project was authorized prior to WRDA 2000, implying certain consequences for their implementation. The water supplied for these projects should ultimately be preserved against being permitted for consumptive uses, either by incorporating it into the pre-CERP baseline at a future date, or by adopting a reservation for it. In addition, water for these projects should come from other-than-CERP water, while being exempt from claims from other users under the savings clause, since the projects are not part of implementing the CERP, a requirement of invoking the savings clause argument. When these projects come on line, we should have a mechanism in place to provide the water necessary. We urge you to develop this protocol under the authority of this document.

We urge you to resolve the quantity of water available for the natural system on a regional basis before this white paper is finalized. Compounding the results of that analysis will be the intention of CERP to remove human-made barriers and compartmentalization that originally contributed to the decline of the Everglades. With this decompartmentalization, the idea of splitting Everglades National Park from the Water Conservation Areas 3A and 3B will be moot; the only changes to the hydropatterns of those areas will be how much water is put into the system at the top. A thorough analysis of the changes should be incorporated into this document through adaptive management built into the CERP.

NPCA supports the District's initiative to develop parameters to reserve water as it becomes available through implementation of individual CERP projects. We use this opportunity to express the fact that the proper amounts of water required to restore the remaining Everglades should be provided to the natural system according to the Plan and the processes of adaptive management. Water reservations are intended to reserve that water necessary for the restoration of the ecosystem and only then should excess "new water" be available for other purposes.

Thank you again for the opportunity to comment on this draft white paper. In addition to the comments provided here, we support the comments that have been submitted by the Environmental and Land Use Law Center, Natural Resources Defense Council and the World Wildlife Fund and Audubon of Florida. We look forward to working with you in the future to assure that historic, beneficial water supply for fish and wildlife is protected and that future water contained by CERP projects are adequately reserved for the natural environment.

Sincerely,



John Adornato, III
Regional Representative

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August 21, 2002

Kenneth G. Ammon, P.E.
Director, Water Supply Department
South Florida Water Management District
P.O. Box 24680
West Palm Beach, FL 33416-4680

Re: Reservation White Paper

Dear Mr. Ammon:

Thank you for the opportunity to comment on the June 25, 2002 "Reservations of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State Law." The document is extensive and clearly shows a tremendous amount of staff work in its development. Despite this, we continue to have some basic questions regarding the proposed concepts. In hopes of continuing the dialogue we have set these forth below. The focus of these comments is on the "Guiding Principles", as the cornerstones for the paper. Please note that due to the conflicting deadlines of other related projects, additional detailed comments will be provided under separate cover.

OVERALL COMMENTS

We still are concerned that the District continues to prepare the policies and papers dealing with water supply in what appears to be an unrelated manner. This paper deals with reservations, but it does not cross reference the impact on the Lower East Coast Plan, water shortages, permit renewals, supply side management, adaptive protocols and water resource development.

Water Needs for CERP - and Non-CERP Projects

Of primary concern is the intent of the document. Page 5. lines 7-13, state that the purpose of the paper is twofold. One purpose is to provide for the process of reserving water for CERP. The second purpose is to identify issues for the entirety of the natural system.

As the discussion on these subjects continues, we are beginning to question whether both purposes should be contained in the same document. Under WRDA, the responsibility of the District is to provide protections under state law for the water "made available by the (CERP) Projects." This protection is developed for "new water", that is water that is made available by CERP for the natural system. Should the process that determines the new water from CERP be contained in the same document that details the water needed for healthy ecosystem protection for projects outside of CERP? Are they the same process?

State and Federal Law

The establishment of reservations is a matter of state law. Section 373.223(4) F.S. This was recognized in WRDA 2000. However, the paper continues to indicate that reservations will be made consistent with "state and federal law". Clarification of the reference to federal law would be appreciated.

State Law

State law requires balance and several parts of the paper seem to focus only on the natural system part of the equation. State law requires the water management district to fund and implement water resource development. 373.081(3). F.S. If this paper is an overall commitment for reservations, the water resource development component should be evaluated concurrently.

GUIDING PRINCIPLES

The guiding principles on pages 12-14 establish the policies that will determine the model. These policies are translated into assumptions which will then dictate the quantity of water available for future use through permitting, actual deliveries, reservations, and the saving clause.

General System Wide/ Regional System Conditions

The paper uses the December 2000 date as it is the same date of the savings clause. However, we are unaware of the hydrologic/climatic significance of that year. Was it average? A dry period, wherein insufficient water existed to provide for the 1 in 10 level of certainty or was it an above average period wherein there was excess water going to the natural system?

Why should the December 2000 date be utilized for the reservation process other than for the purpose of source switching under WRADA. Consider Section 373.223(4) F.S., which protects existing legal uses of water that are within the public interest. We recommend updating the model to the current year for all non-CERP reservation purposes.

Summarizing the use to reflect demands under varying rainfall can be done using actual acreage or permitted acreage for agriculture. However, public water supply demands are more complex. Is it appropriate to use averages when climatic conditions are also important to urban demands, as irrigation use can be major demand on some utilities?

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Hydrologic Conditions

We concur that the model should be brought current and that rainfall and ET will be added to the period of record for the CERP Projects. (1965 to 2000). However, we suggest that the 2001 year should be included in the period of record so that the most recent, and the most significant, water shortage is reflected.

We question why the issue of estimating supplemental irrigation requirements is raised in this paper. The LEC/RESTUDY model used AFSIRS to calculate the irrigation demands.

Physical Conditions Structures

To determine if the model should reflect the natural system projects that were authorized but not constructed, one needs to determine what the use of the model will be. In addition, it appears that the same principle should apply to all authorized but not constructed choices, including the permitted but not utilized demands.

Operational Conditions

Similar to the above discussion, the question of experimental water deliveries must be asked in light of the use of the model. All human uses that were anticipated to become operational should also be included.

Supply/Source Conditions

Before determining the supply source conditions parameters, we need to know what significance will be attached to each of these sources. All uses will have a local rainfall component. For example, if it is raining, the natural system will be receiving rain as will the agricultural crops. The aquifer will be replenished. Statistically supplemental crop requirements will not be allocated during these events for either commercial or homeowner irrigation.

The reasons for the distinctions of primary, secondary and tertiary supply are not explained. We will assume that rainfall is used directly or indirectly by all users, including the natural system. The secondary source becomes the one that is subject to debate. For instance, the LOSA service area has the lake as a secondary source. While Miami-Dade service area has the secondary source, Biscayne aquifer, with Lake the tertiary source. This becomes very confusing as the operational protocols drive the Lake. Is the intent to differentiate between the regional system and a source not dependant on the regional system? Or is it the intent to give some users (or natural system) a priority? How does this correlate with the present rule that protects a given quantity of water for recharge of the LEC (under supply side management) but does not place the same burden for cutbacks on LEC users as those within LOSA? This may be addressed in modified supply side management and water shortage rules.

The concept of the water bank account requires further explanation. We are having difficulty understanding the impact on permittees of the process that is explained later on page 23.

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Demand Conditions

The District modeled the demand conditions for existing and future water needs in the Lower East Coast Plan. In that plan, the District concluded that the needs of both the natural systems and the users would be met in 2020. Between now and 2020, users, including human and natural system, all would share in the adversity.

Irrigation demands should be calculated based upon permitted acreage. Public Water demands should be calculated based upon the permitted per capita and populations. This is needed to equalize the human uses and the natural uses to provide for authorized but not constructed projects.

The conclusion over the Blaney model should be clarified. Blaney is accurate (equivalent to ASIRS) for determining the quantity of water needed during a 1 in 10 year drought.

One concern the users have is whether it is fair to apply ASIRS to supply side management during drought cutbacks. That is not a modeling issue for reservations. It is a critical issue that is part of the entire package of water issues. During water cutbacks, there should be fairness in how the cutbacks are managed, i.e., 15% for a phase 1, 30% for a phase 2 and 45% for a phase 3. Among user classes, the water shortage policy was to spread the adversity so that no one class suffered a disproportionate share of the cutback. This issue needs to be addressed in the ongoing rulemaking for water shortage changes.

How will the non-consumptive uses in urban and agricultural service areas be accounted for? As an example, a permit that includes mitigation may have assumed a certain water table elevation under existing conditions. If operations change that and it is lower, the success of the mitigation may be less. Will these wetlands be protected with the same level of water table? Projects with protected wetlands were evaluated based upon a certain level of water delivery, perhaps as part of a diversion and impoundment system. If the allocation is changed, how will these wetlands be protected?

We are also concerned that an important general principle is missing from this discussion. Wetlands within developed areas, agricultural and urban projects that rely upon existing water deliveries must continue to be protected through the existing water deliveries that are tied to diversion and impoundment permits. The surface water management or ERP reviews considered the water elevations by the drainage districts determined if the wetlands were to be impacted, and how they would perform if mitigated.

How will the water discharged to tide be quantified? What amount of this water is being captured by CERP? How much of it is providing a non consumptive use benefit, such as for wetland storage? And what quantity is then remaining to be permitted for new uses?

Conclusion

Once again, thank you for the opportunity to comment. As you can see by the above questions, we have significant basic issues with the manner that the paper is presented. Perhaps additional workshops where staff can explain the concepts and respond to questions will assist in continuing to move forward on the important issue of reservation. We are looking forward to continuing such dialogue with the District.

Sincerely,

Irene Kennedy Quincey
IKQ/css

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Watershed Council
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August 26, 2002

Ms. Sherry Scott, P.G.
Water Policy Coordinator
South Florida Water Management District
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West Palm Beach, Florida 33406

Re: Draft White Paper on "Reservation of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State Law"

Dear Ms. Scott:

The Southwest Florida Watershed Council appreciates this opportunity to comment on the Draft White Paper on Reservations of Water for the Environment and Assurances of Existing Legal Sources Consistent With Federal and State Law. The Watershed Council is a grass roots, multi-county coalition of individuals, organizations, agencies and businesses that have come together to address issues affecting the Caloosahatchee and Big Cypress watersheds. We have a strong interest in reservations of water for the environment, both as part of the Comprehensive Everglades Restoration Program (CERP) process and as an independent state process for protecting the valuable estuarine and coastal watershed resources of our region.

We believe that the reservation of water for the environment is a key issue in Everglades restoration. Because of increasing demands and current water shortfalls, we are deeply concerned that by the time CERP projects are in operation, there may not be enough water available to reserve for the environment. Some watersheds, such as the Caloosahatchee, may be over-permitted now, and there is concern that natural systems have not been protected in the consumptive use permitting process. We believe that there is a need to reserve water for the environment today -- before the design and construction of CERP water projects.

While the Water Resources Development Act of 2000 (WRDA) and the federal-state agreement require existing consumptive uses to be protected, focusing too fervently on existing consumptive uses today could lead to little water for the environment tomorrow. CERP projects should be designed to deliver water for the environment, first and foremost, and then be expanded or modified as necessary to satisfy consumptive uses.

We have been encouraged by language in the White Paper and by discussions with staff from the South Florida Water Management District (SFWMD) that the SFWMD is considering "pre-

CERP" reservations for protecting fish and wildlife in estuaries in the region. For the Caloosahatchee and its estuary, especially, we strongly urge you to expedite this process to ensure that the allocation of "baseline" water solely for existing users does not destroy the resource before additional water is made available from CERP projects in the basin. Any baseline for the Caloosahatchee should include enough water to make protection of natural systems a reality today.

It is not just the natural system that will suffer if the resources provided by the Caloosahatchee and other coastal estuaries are destroyed. The economy of the region will also suffer. It has been estimated that the Caloosahatchee estuary alone contributes $147 million to the regional economy.

Specific comments follow that are referenced to the page number and line number of the White Paper:

Page 6, lines 28-42:
We would like the White Paper to clarify whether the language of the WRDA "savings clause" in Section 601(h)(5) means that the water necessary for fish and wildlife in the Caloosahatchee, for instance, will be considered an "existing legal source of water." How and when will the amount of this water be determined? If this is considered as part of the baseline, how is this water protected now? This water has not been reserved, nor has it necessarily been adequately protected through the Consumptive Use Permitting (CUP) process to date. Protection of this water should not have to await the construction of CERP projects.

Page 7, lines 11-20:
We would like the White Paper to explain how the District intends to implement Section 373.1501(5)(a). Will this analysis and evaluation proceed now or after the operation of CERP projects for additional water?

Page 7, lines 22-28:
Section 373.1501(5)(d) protects "existing legal users," but this term has not been defined in either the statute or the District's rules. Can "existing legal users" include water necessary for fish and wildlife, as it does under WRDA?

Page 8, lines 13-14:
We believe that certain "existing legal uses" in the Caloosahatchee basin are contrary to the public interest, as evidenced by extensive low flow impacts and Minimum Flows and Levels (MFL) rule exceedences. These conditions have resulted from an operation schedule for Lake Okeechobee that emphasizes storage for uses other than the estuarine environment.

Page 10, lines 36-38:
CUP criteria do not prevent harm to Caloosahatchee water resources up to and including the one in ten year drought frequency. These problems need to be resolved before the pre-CERP reservation can be effectively determined.

Page 12, lines 30-34:
While this principle includes the quality of the water for the baseline, and WRDA speaks in terms of quantity and quality of water for the environment, there is no discussion in the White Paper about how the quality of the water that is reserved for protection of fish and wildlife will be ensured. This has been an issue in the Okeechobee/Caloosahatchee system, with polluted back-pumped agricultural runoff used to provide freshwater flows for the estuary.

Page 13, lines 1-9:
This principle needs to be clarified, particularly for a pre-CERP baseline for water necessary for fish and wildlife. If the Caloosahatchee River, for instance, had ample freshwater flow in 1995, but not in December 2000, what would the baseline be for water for fish and wildlife?

Page 13, lines 19-40:
If projects and operations in place as of December 2000 are considered part of baseline, will MFLs also be considered part of baseline?

Page 13, line 42-46:
It is unclear how local rainfall, surface storage, and runoff can be regional sources of available water. If these local sources were allocated to the region, then they would no longer be available locally.

Page 14, lines 4-5:
While sources may vary with precipitation and hydrology, we do not believe that they should be assigned priority based on manipulation of the sources for human needs. This could mean that the environment is always assigned the least reliable sources.

Page 14, lines 7-16:
We disagree with the principle as stated. We strongly support a principle, as discussed in the issue statement, that demands should be based upon permits in use.

Page 14, lines 26-29:
We support the inclusion of MFLs as demands.

Page 14, lines 30-37:
We support the inclusion of demands for water deliveries for wetland protection, aquifer recharge, other resource protection, and fish and wildlife. It is unclear whether the use of the term "regional environmental areas" is intended to restrict fish and wildlife "demands" to certain specific areas or whether the term is used generally. Does this mean that water necessary for fish and wildlife in other areas cannot be considered a demand?

Page 14, lines 39-42:
Historic operational deliveries under federal regulation schedules have caused extensive impacts from low flows to the Caloosahatchee Estuary and, as such, should not represent fish and wildlife demands.

Page 15, lines 9-17:
It is unclear how the definition ties in with the definition of "demands" on page 14. Instead of demands, the term "of which there was a dependence" is used. Is this synonymous with "demands"?

We support the inclusion of resource protection and protection of fish and wildlife as existing legal sources. The problem, however, is that these sources are not necessarily being adequately protected now. We want to make sure that these sources are protected prior to the CERP reservations, so that they do not have to compete with Everglades restoration.

Existing legal sources, as defined, may not be consistent with the "presently existing legal uses of water," particularly if the SFWMD interprets this second term as including permits not in use, as opposed to permits in actual use.

Page 15, lines 19-28:
Would the operational conditions that existed in December 2000 determine the amount of water reserved for fish and wildlife in the Caloosahatchee, for instance, even if the operational conditions as of that date resulted in reduced freshwater flows that were much less than those that prevailed under previous operational conditions?

Page 16, Table and Figure 3:
We are concerned that the Caloosahatchee has been classified as an agricultural legal source user basin. Was this based on hydrology, water use, or economic activity? The water naturally flows to the estuary, serving fish and wildlife. Most of the economic activity is urban.

We request that both the Caloosahatchee estuary and Estero Bay be classified as legal source user basins for environmental purposes.

Page 17, lines 4-16:
The pre-CERP baseline is going to estimate the amount of water available to the environment. Yet, the proposal is to exclude "regulatory discharges," because these have not been historically depended on by the natural system. The term, "regulatory discharges," is not defined in the document, but the term has been used to refer to discharges from Lake Okeechobee based upon the U.S. Army Corps of Engineers schedule for regulating lake levels. Regulatory discharges from Lake Okeechobee, including discretionary releases under the WSE schedule, are often the only sources of water to maintain the Caloosahatchee Estuary during dry season conditions. Regulatory discharges are an important component of flow maintenance for compliance with the MFL Recovery and Prevention Plan to the Caloosahatchee Estuary during the dry season and as such should be included in the volume probability curve. We also believe that there is no basis for assuming that higher wet season flows have not been historically depended on by the natural system. Wet season flows of freshwater in the Caloosahatchee would have been historically higher than dry season discharges prior to the installation of control structures and implementation of regulatory releases, leading to fish and wildlife dependence on these fluctuations. Does this proposal mean that only the dry season flow can be considered as necessary for fish and wildlife?

Pages 18-24:
While WRDA and state law provide that the water reserved for natural systems from CERP projects should meet water quality standards, the discussion of how CERP reservations will function only deals with quantity and not quality. We are concerned that nutrients and other pollutants delivered to estuaries through restored flows in the Everglades may create more damage to those ecosystems.

Page 21, lines 9-39:
This section on pre-CERP water reservations for the environment focuses on water for the Everglades Protection Area. We believe strongly that other pre-CERP reservations should be made for estuaries and coastal watersheds throughout the region.

Page 26, Figure 1:
The line in the figure for "Existing Environmental Performance (2000)" should not be the baseline for the environment. This line should include a pre-CERP reservation for the environment that is sufficient to protect fish and wildlife.

Page 28, Figure 3:
The figure should also show the western part of the Caloosahatchee basin.

Page 42, lines 29-31:
We again suggest that permits in use be viewed as a demand condition assumption.

Page 42, line 40:
Tidal discharges that are necessary to protect fish and wildlife should be included in demands.

Page 43, lines 1-3:
Again (note page 14 comment), historic operational deliveries have been damaging to fish and wildlife in the Caloosahatchee Estuary and should not be considered appropriate demands for fish and wildlife.

Page 49, lines 42-45:
How are the boundaries of these "environmental areas" defined? Do they include upstream areas and flow ways?

As a last, generalized comment, we would like to encourage you to move away from the idea of using *either* actual use *or* amounts permitted for baseline numbers, and instead use permitted amounts -- *where progress toward the permitted use has been demonstrated.* This will provide for entities issued permits who are *actively* planning for additional use.

On behalf of the Watershed Council, I request that you incorporate these comments in a redraft of the strategy in the White Paper. Please inform me of the District's response to these comments and let me know what the next steps will be in the process.

Sincerely,

Noel Andress

Noel Andress
Chairman

THE CONSERVANCY
Of Southwest Florida

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www.conservancy.org

August 29, 2002

Ms. Sherry Scott, P.G.
Water Policy Coordinator
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

Re: Draft White Paper on "Reservation of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State Law"

Dear Ms. Scott:

The Conservancy of Southwest Florida appreciates this opportunity to comment on the Draft White Paper on Reservations of Water for the Environment and Assurances of Existing Legal Sources Consistent With Federal and State Law. The Conservancy is a thirty-eight-year-old non-profit organization with over 6,000 members throughout Southwest Florida. We have a strong interest in Everglades restoration and in the protection and restoration of the valuable estuarine and coastal watershed resources of our region.

On behalf of The Conservancy of Southwest Florida, I request that you incorporate these comments in a redraft of the strategy in the White Paper. Please inform me of the District's response to these comments and let me know what the next steps will be in the process.

Sincerely,

Gary A. Davis
Director, Environmental Policy

COMMENTS OF THE CONSERVANCY OF SOUTHWEST FLORIDA ON SFWMD DRAFT WHITE PAPER ON RESERVATIONS OF WATER FOR THE ENVIRONMENT AND ASSURANCES OF EXISTING LEGAL SOURCES CONSISTENT WITH FEDERAL AND STATE LAW

August 29, 2002

GENERAL COMMENTS

The Conservancy of Southwest Florida believes that reservations of water for the environment are the key issue in Everglades restoration. Because of increasing demands and current water shortfalls, we are deeply concerned that by the time CERP projects are in operation, there will be no water available to reserve for the environment. Some watersheds, such as the Caloosahatchee River, may be over-permitted now, and, despite the required finding in every permit that there will be no adverse impacts, we are concerned that natural systems have not been protected in the consumptive use permitting process to date. We believe that there is a need to reserve water for the environment today, before the design and construction of CERP water projects.

Overall, while WRDA 2000 and the federal-state agreement make it clear that water for environmental restoration is the top priority of the CERP, the White Paper places priority on determining and protecting "existing legal sources of water," which include consumptive uses for agriculture and water supply. We believe that a focus on determining and protecting existing consumptive uses first is backwards. In keeping with the explicit intent of WRDA 2000 and the federal-state agreement, the water necessary for the environment should be determined first, both the current environmental needs and the needs for Everglades restoration, not after protection of existing consumptive uses. CERP projects should be designed to deliver water for the environment, first and foremost, and expanded or modified as necessary to satisfy consumptive uses later.

The Conservancy has been encouraged by language in the White Paper and by discussions with District staff that the District is considering "pre-CERP" reservations for protecting fish and wildlife in estuaries in the region. For the Caloosahatchee and its estuary, especially, we strongly urge the District to expedite this process to ensure that the allocation of "baseline" water through consumptive use permitting and flood control management does not destroy the resource before additional water is made available from CERP projects in the basin. Any baseline for the Caloosahatchee should include enough water to make protection of natural systems a reality today.

It is not just the natural system that will suffer if the resources provided by the Caloosahatchee and other coastal estuaries are destroyed. The economy of the region will also suffer. It has been estimated that the Caloosahatchee estuary alone contributes $147 million to the regional economy.

COMMENTS ON SPECIFIC SECTIONS

Specific comments follow that are referenced to the page number and line number of the White Paper:

Page 6, line 28-42:

We would like the White Paper to clarify whether the language of the WRDA "savings clause" in Section 601(h)(5) means that the water necessary for fish and wildlife in the Caloosahatchee, for instance, will be considered an "existing legal source of water." How and when will the amount of this water be determined? If this is considered as part of the baseline, how is this water protected now? This water has not been reserved or protected through the CUP permitting process to date. Protection of this water should not have to await the construction of CERP projects.

Page 7, line 11-20:

We would like the White Paper to explain how the District intends to implement Section 373.1501(5)(a). Will this analysis and evaluation proceed now or after the operation of CERP projects for additional water?

Page 7, line 22-28:

Section 373.1501(5)(d) protects "existing legal users," but this term has not been defined in either the statute or the District's rules. Can "existing legal users" include water necessary for fish and wildlife, as "existing legal sources" does under WRDA?

Page 8, line 1-28:

We are concerned that the state reservations provision may not be broad enough to reserve sufficient water for natural systems, because it only focuses on reserving water from consumptive uses. It does not take into account reduction of available water by filling of wetlands as a result of ERP decisions. Nor does it take into account the reduction of available water by operational decisions of the District or the U.S. Army Corps of Engineers, such as the lowering of Lake Okeechobee for flood control. Part of the program for pre-CERP reservations should include the development of operational protocols for the entire water management system for South Florida so that the system protects fish and wildlife resources.

We would support a process for determining whether certain "existing legal uses" are contrary to the public interest as part of the creation of new reservations. There may be "existing legal uses" in the Caloosahatchee basin now that are contrary to the public interest, as evidenced by extensive low flow impacts and MFL rule exceedences. These conditions have resulted from an operation schedule for Lake Okeechobee that emphasizes storage for uses other than the estuarine environment.

Page 9, lines 24-41:

We are concerned that water reservations for natural systems will not be protected with severe droughts. In droughts that are 1:10 or worse, natural systems would be part of the "shared adversity" approach. In practice, however, the District has been reluctant to impose restrictions upon consumptive uses during droughts and natural systems have borne more than their share of the adversity. We believe the District should establish reservations that function during the full range of drought conditions. Anything less would seem to be inconsistent with the intent of WRDA 2000.

Page 10, lines 36-38:

For the Caloosahatchee consumptive use permitting criteria do not currently prevent harm to water resources up to and including the one in ten year drought frequency. These problems need to be resolved before the pre-CERP reservation can be effectively determined. In other words, we believe that a pre-CERP reservation for the Caloosahatchee should be on top of the MFL and "no harm" standards.

Page 12, line 30-34:

While this principle includes the quality of the water for the baseline, and WRDA speaks in terms of quantity and quality of water for the environment, there is no discussion in the White Paper about how the quality of the water that is reserved for protection of fish and wildlife will be ensured. This has been an issue in the Caloosahatchee and Okeechobee system with polluted back-pumped agricultural runoff used to provide freshwater flows for the estuary.

Page 13, line 1-9:

This principle needs to be clarified, particularly for a pre-CERP baseline for water necessary for fish and wildlife. If the Caloosahatchee River, for instance, had ample freshwater flow in 1995, but not in December 2000, what would the baseline be for water for fish and wildlife?

Page 13, line 19-40:

If projects and operations in place as of December 2000 were considered part of baseline, would MFLs also be considered part of baseline?

Page 13, line 42-46:

It is unclear how local rainfall, surface storage, and runoff can be regional sources of available water. If these local sources were allocated to the region, then they would no longer be available locally.

Page 14, line 4-5:

While sources may vary with precipitation and hydrology, we do not believe that they should be assigned priority based on manipulation of the sources for human needs. This could mean that the environment is always assigned the least reliable sources.

Page 14, line 7-16:

We disagree with the principle as stated. We strongly support a principle, as discussed in the issue statement, that demands should be based upon actual water used, not permitted amounts, particularly where there is no potential for permitted amounts to be used. For instance, a CUP may be issued for a project, but other permits are not issued, and the project is abandoned. Or the project is permitted and constructed, but at a reduced size. It does not make sense for the full permitted amount to be considered a demand.

The relationship of "demands" to the determination of "existing legal sources" should be explained.

For agriculture, we support a principle to include only crop acreage actually irrigated. These actual uses have resulted in low flows in the Caloosahatchee without taking into account permitted acreage.

Page 14, line 26-29:

We support the inclusion of MFLs as demands.

Page 14, line 30-37:

We support the inclusion as demands of water deliveries for wetland protection, aquifer recharge, other resource protection, and fish and wildlife. It is unclear whether the use of the term "regional environmental areas" is intended to restrict fish and wildlife "demands" to certain specific areas or whether the term is used generally. Does this mean that water necessary for fish and wildlife in other areas cannot be considered a demand?

Page 14, lines 39-42:

Historic operational deliveries under federal regulation schedules have caused extensive impacts from low flows to the Caloosahatchee Estuary and, as such, should not represent fish and wildlife demands.

Page 15, line 9-17:

Again, it is unclear how the definition ties in with the definition of "demands" on page 14. Instead of demands, the term "of which there was a dependence" is used. Is this synonymous with "demands"?

We support the inclusion of resource protection and protection of fish and wildlife as existing legal sources. The problem, however, is the fact that these sources are not being protected now. We want to make sure that these sources are protected prior to the CERP reservations, so that they do not have to compete with Everglades restoration.

Existing legal sources, as defined, may not be consistent with the District's "presently existing legal uses of water," particularly if the District interprets this second term as including permitted consumptive uses instead of actual uses.

Page 15, line 19-28:

Would the operational conditions that existed in December 2000 determine the amount of water reserved for fish and wildlife in the Caloosahatchee, for instance, even if the operational conditions as of that date resulted in reduced freshwater flows that were much less than those that prevailed under previous operational conditions?

Page 16, Table and Figure 3:

We are concerned that the Caloosahatchee has been classified as an agricultural legal source user basin. Was this based on hydrology, water use, or economic activity? The water naturally flows to the estuary, serving fish and wildlife. Most of the economic activity is urban. We also request that both the Caloosahatchee estuary and Estero Bay be classified as legal source user basins for environmental purposes.

Page 17, line 4-16:

The pre-CERP baseline is supposed to estimate the amount of water available to the environment. Yet, the proposal is to exclude "regulatory discharges," because these have not been historically depended on by the natural system. "Regulatory discharges" is not defined in the document, but the term has been used to refer to discharges from Lake Okeechobee based upon the Corps of Engineers schedule for regulating lake levels. Regulatory discharges from Lake Okeechobee, including discretionary releases under the WSE schedule, are often the only sources of water to maintain the Caloosahatchee Estuary under dry season conditions. We suggest that regulatory discharges are an important component of flow maintenance for compliance with the MFL Recovery and Prevention Plan to the Caloosahatchee Estuary during the dry season and as such should be included in the volume probability curve. We also believe that there is no basis for assuming that higher wet season flows have not been historically depended on by the natural system. Wet season flows of freshwater in the Caloosahatchee would have been historically higher than dry season discharges prior to the control structures and regulatory releases, leading to fish and wildlife dependence on these fluctuations. Does this proposal mean that only the dry season flow can be considered as necessary for fish and wildlife?

Page 18-24:

While WRDA and state law provide that the water that is reserved for natural systems from CERP projects should meet water quality standards, the discussion of how CERP reservations will function only deals with quantity and not quality. Nutrients and other pollutants delivered to estuaries through restored flows in the Everglades may create more damage to those ecosystems.

Page 21, line 9-39:

This section on pre-CERP water reservations for the environment focuses on water for the Everglades Protection Area. We believe strongly that other pre-CERP reservations should be made for estuaries and coastal watersheds throughout the region.

Page 26, Figure 1:

The line in the figure for "Existing Environmental Performance (2000)" should not be the baseline for the environment. This line should include a pre-CERP reservation for the environment that is sufficient to protect fish and wildlife.

Page 28, Figure 3:

The figure should also show the western part of the Caloosahatchee basin.

Page 42, lines 29-31:

We again suggest that actual use be viewed as a demand condition assumption. Even this level of use has restricted needed flows from Lake Okeechobee to the Caloosahatchee Estuary under drought and other dry season conditions.

Page 42, line 40:

Tidal discharges that are necessary to protect fish and wildlife must be included in demands.

Page 43, lines 1-3:

Again (note page 14 comment), historic operational deliveries have been damaging to fish and wildlife in the Caloosahatchee Estuary and should not be considered appropriate demands for fish and wildlife.

Page 49, line 42-45:

How are the boundaries of these "environmental areas" defined? Do they include upstream areas and flow ways?

USDA

United States Department of Agriculture

Office of the Secretary
Washington, D.C. 20250

Mr. Kenneth G. Ammon
Director
Water Supply Department
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

Dear Mr. Ammon:

Thank you for your letter of June 28, 2002, requesting that the Department of Agriculture (USDA) review and comment on the draft document, "Reservations of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State Law." We are interested in water conservation in providing an adequate supply of water for all purposes, as outlined in the Comprehensive Everglades Restoration Plan for South Florida.

USDA's preliminary comments are included as an enclosure to this letter. We look forward to working with the Federal and State agency partners for this project.

Again, thank you for writing and providing us with the opportunity to be involved in identifying the methodology for protecting this water resource.

If you have any questions, or if you need further assistance, please contact Ronald Marlow, Director of the Conservation Engineering Division, Natural Resources Conservation Service, at (202) 720-2520.

Sincerely,

Mack Gray

Mack Gray
Deputy Under Secretary
Natural Resources and Environment

Enclosure

U.S. DEPARTMENT OF AGRICULTURE

Comments

Reservations of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State Law

General Comments

The document needs to address changes in water consumption by urban and agricultural users through Best Management Practices (BMP). There are water conservation efforts in existence, such as the Mobile Irrigation Labs, that educate the public on water conservation. There are also cost-share programs by the Florida Department of Agricultural and Consumer Services and the USDA Natural Resources Conservation Service. These programs focus on improving the efficiency of agricultural irrigation systems.

There are assumptions in the Central and Southern Florida Project Comprehensive Review Study that account for additional water available to the natural system by reducing consumption. This will require some discussion of how these types of changes will be handled in future calculations of legal water reservations.

Specific Comments

1. Page 11, rows 41-43

Suggest that the ongoing interagency team setup ((through the Comprehensive Everglades Restoration Plans (CERP) RECOVER process)) be named. As a result, the question arises of whether the identification of a base case assumption has been assigned to a specific RECOVER team. The determination of the base case assumption might best be determined by the Initial CERP Update Project Delivery Team.

2. Page 13, rows 11-18 & Page 14, rows 12-25

There is more to estimating supplemental irrigation requirements than the determination of the evaporation-transpiration (ET) method used. USDA Natural Resources Conservation Service has formally adopted the Penman-Monteith (PM) equation as our Agency's official ET model and procedure. Our recently issued NEH Part 623, Chapter 2, Crop Water Requirements, presents this procedure. AFSIRS uses a modified Penman approach.

A good reference is the St. Johns River Water Management Report, Evaluation of Reference Evapotranspiration Methodologies and AFSIRS Crop Water Use Simulation Model (http://sjr.state.fl.us/programs/outreach/pubs/techpubs/sj2001-sp8.pdf).

Permitted usage is significantly different than actual usage. This type of usage is based on the amount of water that is needed to supply irrigation requirements for a certain level of service during a drought. This could mean that the permitted usage amount would be that amount of irrigation needed during 1 in 10 drought years. Actual usage is based upon the current weather. A wet growing season means less need for irrigated water.

Calculation of actual irrigation water usage is very site specific. The actual amount of water used is based not only on the weather, rainfall and crop evapo-transpiration, but the type of irrigation system of its corresponding irrigation efficiency. The water amount is also used to determine the irrigation scheduling method of the farm operator.

3. Page 24, rows 4-8

Agricultural users withdraw water from both the C-23 and the Floridan Aquifer. One of the goals of the IRL Project is to reduce usage of the Floridan Aquifer by replacing that usage with water from the IRL reservoir supplies. The shift would be from C-23 and Floridan Aquifer usage to IRL reservoir usage.

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

AUG 19 2002

Henry Dean
Executive Director
South Florida Water Management District
Post Office Box 24680
West Palm Beach, Florida 33416-4680

Dear Mr. Dean,

Thank you for the opportunity to comment on the most recent draft white paper, "Reservations of Water for the Environment and Assurances for Existing Legal Sources Consistent with Federal and State law." We recognize the complexity of the task undertaken in this draft document and are encouraged by the progress the District has made toward developing an approach for implementing the water reservations and assurances requirements for the Comprehensive Everglades Restoration Plan (CERP).

As you know, the Department of the Interior has extensive responsibilities for federal lands and resources throughout south Florida. Interior resources include national parks, national wildlife refuges, federally-listed threatened and endangered species and migratory birds. In general, we note the importance of maintaining sufficient water levels and flows, with the appropriate quantity, timing and distribution, to support and protect freshwater ecosystem functions, terrestrial and avian communities, wetlands, and estuarine and coastal ecosystems.

The white paper appropriately addresses actions to be taken by the District in its delegated authority under state law, including development of rules for regional water availability, reservation of water, and issuance of consumptive use permits for water to be made available by CERP and other projects. We look forward to commenting further on these issues through the rule development process.

The reservations white paper also addresses several actions that will be undertaken as part of CERP, including the development of the pre-CERP baseline, quantification of water to be reserved for CERP projects during the development of Project Implementation Reports (PIRs), and protection of existing legal sources in accordance with the savings clause of the Water Resources Development Act of 2000 (WRDA 2000; Pub. L. 106-541). The draft programmatic regulations presently undergoing public comment propose procedures to guide CERP implementation for these issues. Accordingly, we believe these issues should be addressed within the procedures that are ultimately adopted to implement the CERP.

In addition to the issues noted above, there are three main issues that are of considerable importance to the Department. First, we are pleased to see the concept of an initial pre-CERP

reservation of water for the environment to include the Water Conservation Areas and Everglades National Park. Consistent with the District's Lower East Coast Regional Water Supply Plan, approved by the Governing Board in May, 2000, we also recommend that you consider including other federal and state managed natural areas in an initial reservation. Of particular importance to the Department is the adoption of an initial reservation for Biscayne Bay and Biscayne National Park, which is also designated an Outstanding Florida Water. We believe inclusion of additional federal and state managed natural system areas in an initial reservation will increase protection for fish and wildlife resources, thereby enhancing our ability to achieve our Everglades restoration goals.

Second, and consistent with WRDA 2000 savings clause requirements, the definition of an existing legal source should ensure protection for fish and wildlife resources. We look forward to continued work with the Army Corps, the District, and our other federal, state and Tribal partners, to develop a definition for an existing legal source. Generally, we note that although the white paper proposes to exclude regulatory discharges as an existing legal source, certain Interior-managed conservation lands, including Biscayne National Park and A.R.M. Loxahatchee National Wildlife Refuge, depend upon certain regulatory discharges for a portion of their water supply. Although CERP is largely designed to capture these discharges to make "new" water available for the environment and its restoration, we must improve our understanding and awareness of the dependence of certain fish and wildlife resources on these regulatory releases.

Lastly, since the white paper is silent on the subject of incorporating flood protection, we need to work toward a method to better understand the impacts of flood protection on the natural system, particularly as it affects regional water availability.

Our comments on the reservations white paper are provided as a partner in implementing the CERP, and as a party whose interests and responsibilities are affected by State water management actions. I have included two sets of comments; the first are overriding issues that contain both substantive and policy issues and the second are editorial and technical comments.

The Department appreciates the opportunity to comment on these important issues in water resources protection within the natural areas and looks forward to working with the South Florida Water Management District as work on these proposed protections continues. If you have any questions on the attached comments, please contact Rock Salt at (305) 348-1665.

Sincerely,

Craig Manson
Assistant Secretary
Fish and Wildlife and Parks

Enclosures

ENCLOSURE I

Initial Reservations

The reservations white paper makes significant progress toward developing methods for identifying, protecting, and allocating water for natural system restoration and human uses. We are especially pleased to see a proposal for adopting an initial water reservation for the Everglades National Park. However, we recommend that you consider initial water reservations for all major state and federal water bodies within the South Florida ecosystem. Of particular importance to the Department is the adoption of initial water reservations for Biscayne National Park and Big Cypress National Preserve.

We also support basing initial reservations on a rainfall driven formula. We look forward to working with the District as modeling is developed to blend the concepts of existing legal sources, such as the 1970 Minimum Delivery Act, and rainfall driven schedules.

Existing Legal Sources

The reservations white paper provides a very clear and accurate discussion (pages 12-16) of the issues and debates concerning existing legal sources of water under the Savings Clause in WRDA 2000. However, regulatory releases are not considered to be among the existing legal sources (page 17, lines 13-15). The natural system, including fish and wildlife, has historically depended, and continues to depend, on regulatory releases for a substantial portion of its water supply. Those portions of the regulatory releases should be identified as existing legal sources under the Savings Clause. Exclusion of regulatory discharges as existing legal sources for the natural system will eliminate Savings Clause protection for much of the water upon which the natural system depends.

Flood Protection

The reservations white paper is silent on the subject of how to incorporate flood protection considerations in implementing water supply assurances and reservations. First, we believe that existing flood protection levels of service need to be included in the modeling used to quantify existing legal sources. It is essential that the analyses for saving clause protections for water use and flood protection be compatible.

Secondly, current and future drainage should be accounted for in evaluating regional water availability. The model that is used to quantify regional water supplies should account not only for all present and future uses of water, but also for all present or future committed losses of surface or ground water.

Lastly, although the white paper proposes to consult the regional water availability "ledger " in evaluating new permits for consumptive use, there is no comparable linkage to evaluating new drainage permits. Without such a linkage it is not possible to accurately evaluate any potential impacts of new surface water management permits.

Protection of Reservations During Water Shortages

It is especially important that the natural system be protected during periods of water shortage. The District has advocated an approach of "shared adversity " in droughts that are more severe than 1-in-10 year events. We recognize the importance of water availability for human health and safety during water shortages, but we also believe it is important to balance those interests with the needs of the natural system. We propose the adoption of guidelines for water availability during water shortages taking into account both the needs for human health and safety and the natural system to implement the District's "shared adversity" approach. Natural systems in South Florida are adapted to droughts of the approximate frequency and intensity that occurred prior to human impacts. However, if droughts are more frequent and extreme than those to which the ecosystem and its components can adapt, the ecosystem may be unsustainable, or, even if sustainable, not able to be restored.

Regional Water Availability

The white paper proposes adoption of a regional water availability rule that will identify the amount of water available at any time for all uses within a user basin. The Department supports the expeditious adoption of such a rule. The development of a system-wide "ledger" to track water availability and to define the quantities available for all uses within different basins is an important step toward assuring that water is allocated in a way that will allow the benefits of the CERP to be realized.

ENCLOSURE II
[Specific Editorial And Technical Comments]

Page 5, line 37 (II. A. Paragraph 1) "...should be read out of context to **the** entire WRDA 2000 Act."

Page 10, line 35 – ". . . the user must demonstrate that the proposed rule is reasonable and beneficial." It appears that "proposed permit" was the intended language.

Page 10, lines 36-38 – This statement implies that CUP criteria are set so as to allow harm to water resources in any drought that is more severe than a 1-in-10 year event. However, 1-in-10 year certainty of supply is intended to assure permit holders that they will not experience cutbacks in less severe droughts. We do not agree that the 1-10 year planning target means that harm to the natural system in more severe droughts is acceptable.

Page 10, line 40 (III. Paragraph 3) "**More severe** drought conditions may cause even further reductions..."

Page 11, line 20-22 (III. Paragraph 5, last sentence) It is not clear how a modification in a performance measure can be used to "address" shortfalls in the plan. Changing the target of a performance measure would only serve to rescale our expectations of the plan, it would not improve the performance of the plan. Changing the method of calculation would affect what we measure or how we measure, but would not improve the actual performance of the constructed plan, whether the plan itself was deficient or not.

Page 11, lines 41-45 – It will be important to coordinate RECOVER activities with the public processes involved in rule-development. Although reservation of water for CERP projects will be conducted by the SFWMD under state authority, the intimate relationship between the CERP and state water management rules makes it desirable, if not essential, that the two efforts have input and support from all affected parties. Further development of the pre-CERP baseline, interpretation of the WRDA 2000 savings clause, and guidance on PIR quantification of water for the natural system and other uses, would best be coordinated through appropriate CERP processes such as RECOVER to ensure that all CERP partners are fully involved.

Page 12, line 27 (IV. A. 1. Paragraph 3) missing parenthesis after 2

Page 12, line 30 through p14 – This section presents "guiding principles" for the pre-CERP baseline. At least three functions are proposed for the pre-CERP baseline: identification and quantification of existing legal sources consistent with state and federal law (page 17, lines 26-29); identification of initial regional water availability (page 19, lines 24-25); and comparison during planning of the effect of one or more CERP projects to the conditions prior to CERP (page 22, lines 44-45). The paper assumes that a single pre-CERP baseline can be constructed that will serve all these functions adequately and in accordance with all legal mandates. This needs to be demonstrated. Rather than assuming that all functions of the baseline can be

addressed simultaneously, a step-wise discussion is needed to consider, for each function separately, the baseline properties needed to support these functions. Having identified the key properties for each baseline function, it should then be more straightforward to affirm whether or not a single baseline model simulation can provide all of the information that is required.

Page 12, line 33 (IV. A. 2. Paragraph 1) "...timing, quantity, [**delete and**] distribution, and quality..."

Page 13, lines 8-9 – The paper does not explain why an update of the assumptions used in the 1995 bases for the Restudy and the LECRWSP is an "issue." Further explanation would help to clarify the issue.

Page 13, lines 11-17 and page 14, lines 12-24 –The White Paper should include a summary of the relative merits of the different methods for estimating supplemental irrigation needs, as developed and presented to the public in the "B-list" rule workshops, specifically regarding the draft supplemental irrigation requirments rule (section 2.3 B.O.R.)

Page13, lines 19-29 – Future commitments of water: The issue whether or not these commitments had been made after December 2000 need to be addressed and we look forward to working with you to resolve these important issues.

Page 14, lines 4-5 – It is not clear why the classification of sources as primary, secondary, tertiary is useful to the purposes of this paper as a general principle.

Page 14, lines 34-37 – Identification of "historic operational deliveries for beneficial uses by fish and wildlife" will require considerable work. There are presently only a few existing operational rules that are intentionally directed at providing benefits to fish and wildlife (e.g., Minimum Deliveries to ENP Act; regulation schedule "floor" deliveries to WCA-1). However, the highly manipulated nature of south Florida's hydrology means that most natural areas (the WCAs, Lake Okeechobee, the estuaries and bays) are dependent on regulatory discharges or releases for significant portions of "beneficial" deliveries. Distinguishing which regulatory discharges are beneficial and which are not will be difficult. An appropriate approach would include use of key performance measures for the natural system combined with modeling to determine how natural system performance depends on specific regulatory deliveries. For example, the ability to maintain hydroperiods into the dry season within the WCAs depends at least in part on regulatory discharges into the WCA system during the wet season. Those same discharges may cause immediate detrimental effects in the WCAs, for example by causing wet season depths to exceed those under Natural System Model conditions.

Page 15, lines 24-28 - The white paper proposes to use the South Florida Water Management Model (SFWMM) to quantify existing legal sources, define regional water availability within source basins, identify baseline water for adoption of an initial reservation for the Everglades, and quantify water to be reserved for the natural system. Utilization for this model for these talks involves a multitude of decisions about model assumptions, methods for estimating user demands, and simulation of C&SF project operations during flood events and water shortages. It

is important that appropriate technical staff from all affected parties be informed about and participate in these important model specification decisions. The current effort to develop a multi-agency modeling group in West Palm Beach is an important step toward providing the staffing needed to handle the significant workload, while also improving agency participation and increasing public confidence in the models.

Page 16, Spatial Identification of Existing Legal Source User Basins (Table) – The Table is a good start at identifying Legal Source User Basins and Source Dependence. However, we recommend expanding the table to include other federal and state existing legal source user basins and the sources upon which those user basins are dependent. The following are examples of possible additions:

- EAA as a source for the WCAs
- Biscayne as a Legal Source User Basin listing Local Basin Rainfall, Surficial Aquifer, and WCA's as the sources
- WCA 3A as a source for Big Cypress Natural Preserve
- LEC (Acme Basin B, North Springs Improvement District, and the S-9 Structure) as a source for the WCAs and ENP
- Additional sources for Rotenberger Wildlife Management Area
- Adding estuaries and bays as separate user basins

Also, we would like a clarification of the listing in the table of WCA 3B as a source for Service Area 3.

Page 17, lines 8-10 – Performance evaluation for PIR development will probably be evaluated using either a baseline of 2050, a baseline corresponding to the year the project is expected to become operational, or both. The pre-CERP baseline's use in PIR development will primarily be as a benchmark to consider progress toward reaching overall restoration targets and for considering environmental impacts to comply with NEPA.

Page 17, lines 12-16 – The present natural system has historically depended and continues to depend on regulatory discharges for a substantial portion of its water supply. As stated earlier, the portion of these water flows that are beneficial needs to be identified. Exclusion of regulatory discharges as existing legal sources for the natural system would eliminate savings clause protections for much of the water on which these systems depend. This can be readily documented by comparing discharges through structures into the WCAs, which except for WCA-1 are almost exclusively regulatory in nature, to the amount of local basin rainfall. Structure flows represent a substantial percentage of all inputs to the WCA system.

Page 17, lines 21-24 – Figure 4 depicts an example of a volume duration curve using "percent of time equaled or exceeded" on the x-axis, but labeling regions of the curve as wet, average, or dry "years." This appears to be a mixture of a cumulative volume duration curve that aggregates discharge volumes across all years and a return frequency analysis in which points on the curve represent annual values plotted against annual return frequency. The latter approach is preferable for analysis of the relationship between interannual variation in rainfall and available water supply.

Page 17, line 46 (IV. E. Paragraph 2) "Conversely, seepage control may [**delete have**] not deliver additional water...

Page 18, lines 4-6 – In using the SFWMM to evaluate a proposed CERP project, it is important to consider the future year that will be the basis for the model assumptions. If the CERP project is modeled when it comes on line in year 20xx, for example, and performance of the project is compared to a volume duration curve generated for a 2000 pre-CERP baseline, shortfalls in the performance of the CERP project could appear that are unrelated to plan performance but are the result of intervening factors such as unanticipated increases in water supply demands. Application of the savings clause in this case will be problematic, given that the "fault" is not with the CERP project but with the prediction of future demands. A method for dealing with these model-comparison issues needs to be developed.

Page 19, lines 40-45 -- It is not clear whether this paragraph proposes to use a single climatologic year in the SFWMM to define 1-in-10 drought conditions for the entire region, or if different years would be used in different regions.

Page 20, lines 23-25 – A criterion is proposed for evaluating permit applications based in part on whether or not groundwater withdrawals below a canal will lead to movement of regional water into the well. However, any increase in seepage of regional water out of the canal that results from new well withdrawals should be counted as a debit to the regional water availability, even if the regional water is not drawn into the well. It is still water that is lost from the canal and that would need to be replenished from some source either within the basin or through regional system deliveries.

Page 21, lines 4-7 – It will be very important to develop a process to determine how to re-allocate water if the quantity adopted in the regional water availability rule is insufficient to meet demands within a basin.

Page 21, lines 9-29 – The SFWMD plan to adopt a pre-CERP reservation for the Everglades is a crucial step toward insuring that the natural system does not continue to decline before CERP can being to provide progress toward restoration. However, this section does not address pre-CERP reservations for parts of the system other than the WCAs and ENP. We recommend that the SFWMD adopt pre-CERP reservations for other water bodies, pursuant to the SFWMD's Governing Board's Lower East Coast Regional Water Supply Plan, Planning Document page 197.

Page 22, lines 4-6 – The paragraph states that system-wide assessment of CERP project benefits will be needed "in most cases." It is not clear why this assessment would not be needed for each CERP component.

Page 23, line 41- Page 24 line 8 –Projects that decrease seepage rather than increase supply also need to be accounted for in terms of their spatial location and changes in flow across basin boundaries.

Page 23, lines 10-36 – It would be helpful to discuss how the establishment of reservations and possible updates or modifications of pre-existing reservations would be linked to periodic CERP updates and to the establishment of interim hydrologic goals for restoration.

Page 24, line 29 through page 25 – It would be useful to include a discussion of potential operational changes as a result of adaptive assessment. Hydrologic targets for the natural system are likely to be refined during the long period of CERP implementation, and operations will need to change accordingly.

Page 34, line 4-5 (Appendix A. Project performance) And their definition could be, "The expected benefits of a project as evaluated according to an agreed upon set of performance measures." Your definition of performance measures includes the concept of targets, which are compatible with the performance expected in the CERP, so this detail is not necessary in the project performance definition.

Page 34, line 33 (Appendix A. Volume probability curve) close parenthesis after 'gallons'.

Figures and Appendices

Page 26, Figure 1 – This is a very useful figure, but it contains a few features that are likely to give misleading impressions about the relationship between natural system needs and water supply, as follows.

- NSM performance in many areas is likely to entail quantities of water during the wettest years that are smaller, not larger, than the pre-CERP quantities. With few exceptions the natural system receives too much water during flood years.
- If human demands and natural system demands are added together in this graph, the resulting curve would indicate that more water is needed during the driest years than during intermediate-level droughts (e.g., 1-in-6 to 1-in-10 year droughts, approximately), as a consequence of increasing human demands.
- A graph showing how *total* available water changes as droughts become more severe would be very helpful in illustrating how changing demands for both humans and the natural system can be used to identify the conditions under which the available supply for consumptive uses will be most limited.

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September 9, 2002

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RE: Comments on Reservation White Paper (June 25, 2002)

The following comments are submitted on behalf of the World Wildlife Fund, Natural Resource Defense Council and the Environmental and Land Use Law Center. The "white paper" is an important first step towards developing a methodology for identifying and reserving water for natural systems while providing an appropriate level of protection to existing legal sources. However, it is difficult to provide meaningful feedback until there is an opportunity to review modeling that illustrates the consequences of various approaches under consideration. In the absence of such necessary analyses of how committing to one approach over another will benefit restoration of the natural system, our comments must be considered preliminary in nature.

In general, the outline of proposed procedures for identification of the pre-CERP baseline, the pre-CERP reservation of water for the environment, and the quantification of amounts of water to be "protected" from transfer or elimination by CERP was very informative. However, the commenting organizations have a number of concerns with the approach outlined in the white paper, and items or issues not adequately addressed therein. Detailed in the body of our comments, our chief concerns are the following:

(1) The District does not plan to reserve the water in the regional system that is currently used by fish and wildlife. The amount of existing water currently delivered by the C&SF project that is needed by fish and wildlife should be immediately reserved. "Current deliveries" include amounts of water authorized for delivery to respond to an existing need. The primary purpose of such a reservation would be to protect the pre-CERP baseline of water for the natural system from consumptive use permitting or

operational changes. The Savings Clause only protects a source of water from impacts that result from implementation of CERP. The initial reservation can be adjusted as "new" water is captured by CERP.

(2) The only mention of a pre-CERP reservation for the natural system is limited to the Water Conservation Areas and Everglades National Park. We are deeply troubled by the omission of other important parts of the ecosystem that are intended to reap benefits from CERP implementation, such as Biscayne Bay, the Caloosahatchee Estuary, the St. Lucie Estuary, Big Cypress Preserve and the Lake Worth Lagoon.

(3) The paper raises an issue over whether the C-111 and Modified Water Deliveries Projects should be incorporated into the baseline. Our organizations consider it imperative that this be done, considering these projects were authorized at the time of the authorization of CERP, are nearly completely constructed, particularly in the case of the C-111 Project, and had been previously included in the baseline (2050 without project condition) during the CERP planning process.

(4) It is also critical that operational conditions for water management in and around Everglades National Park incorporate annual minimum water deliveries, along with Base 1983 canal stages in the South Dade Canal System as these are the authorized stages and have been used in project planning processes.

(5) The paper fails to provide an adequate process for the quantification of water sources for, and deliveries to, fish and wildlife. These should be quantified utilizing baseline operational conditions, unless there is a demonstration that such deliveries are harmful to the specific natural area being considered.

Section by section comments are detailed below:

Sections I, II and III.

The introductory sections; "Purpose", "Summary of Relevant Legal Directives" and "Conceptual Relationship between Water Supply and Demands for Human and Natural Systems, Resource Protection Tools and CERP" do a good job of describing the background and regulatory backdrop for the issues identified in the paper. Because these sections are largely explanatory we have no substantive comments on these sections.

Section IV

"Key Concepts in Identifying the Pre-CERP Baseline and Existing Legal Sources of Water"

The pre-CERP condition baseline will provide the basis for quantifying the amount of water made available by CERP, and serve as a basis for the adoption of Regional Water Availability rules to guide future consumptive use permitting. The pre-CERP baseline should document the availability of water from the C&SF Project, as it was constrained and operated on December 2000. "New" water made available by CERP will be quantified by comparison to this baseline.

The identification and adoption of the pre-CERP baseline will have significant consequences as CERP is implemented over the next four decades, and beyond. The federal programmatic regulations, to be adopted by the end of this year, will likely require the Department of the Interior (DOI) concur with the pre-CERP conditions baseline. Accordingly, a process for obtaining DOI's input and concurrence should be established as part of this state process.

General System –Wide/Regional Conditions

The conditions will be based on the assumptions in the 1991 Restudy and the 1995 base case of the Lower East Coast Regional Water Supply Plan (LECRWSP), updated to reflect conditions as of December 2000. This concept seems to be a valid approach. However, more details are needed as to how the underlying assumptions are proposed to be updated, and what efforts will be undertaken to verify the key assumptions underlying the Restudy and LECRWSP.

Hydrologic conditions

A preliminary issue raised in the white paper is which of several available methods of estimating supplemental irrigation requirements should be used. (pg 13, lines 16-17) Given the significant ramifications of establishing the pre-CERP baseline, the most accurate method to estimate the reasonable 1-in-10 annual crop demands must be employed. The Penman-Monteith method is well established as the most accurate and robust method to estimate reference ET. The past decade of research has solidified its status as the international standard by which to judge other reference ET methodologies and is the preferred method by which to estimate crop coefficients. In fact, the Penman-Monteith method is proposed to be utilized in the District's consumptive use permitting criteria as one of the "b-list" rule changes. For consistency sake and because of its superior accuracy the Penman-Monteith methodology should be used in establishing the estimates of supplemental irrigation requirements to be included in the pre-CERP baseline.

Physical Conditions/Structures

It is critical that key restoration projects that had Federal authorization at the time WRDA was enacted – specifically including the C-111 and Modified Water Deliveries projects -- be accounted for in the pre-CERP baseline. It is a well-established rule of statutory construction that lawmakers are presumed to know the state of the law at the time they enact legislation. See Stivers v. Ford Motor Credit Company, 777 So. 2d 1023 (4th DCA 2000). Congress must be presumed to have known that the C-111 and Modified Water Deliveries were authorized, and made no effort to exclude them from the protections afforded existing legal sources. In fact, WRDA 2000 specifically references the Modified Water Deliveries Project as requiring *completion* prior to implementation of particular CERP projects. Moreover, these projects, in particular the C-111 Project, are virtually complete, and it would be unrealistic not to assume that they will be finished and operated. Finally, these projects were incorporated in the CERP planning process as part of the "2050 without project" baseline condition.

Additionally, the quantity of water needed for state mandated projects such as STA's authorized by the Everglades Forever Act should be accounted for in the CERP baseline as well. The mandates of the Everglades Forever Act were enacted well before WRDA 2000. STA 1 East and STA 3 / 4 must not be excluded based upon the mere happenstance of their construction status at the time of the enactment of WRDA 2000. All quantities of water required to fulfill the mandates of the EFA must be included in the pre-CERP baseline as the EFA pre-dates the enactment of WRDA.

Operational Conditions

Temporary "emergency" conditions, such as those under the Interim Structural and Operational Plan (ISOP), should *not* be included in the baseline. The ISOP specifically was found to have been illegally implemented because of failure to conduct proper NEPA documentation.

The *annual* minimum water deliveries pursuant to the 1970 federal statute requiring such deliveries must be part of the operational conditions. The Experimental Program authorized in 1984 only suspended the specific monthly schedule. Finally, so-called "1983 base" canal stages for the South Dade Conveyance System should be utilized as these are the authorized canal stages. The Experimental Program canal stages were exactly that: experimental and temporary. Base 83 canal stages have also been utilized in the Mod Water and C-111 project planning processes.

Other aspects of this issue are difficult to resolve in the absence of regional modeling that demonstrates the effects of inclusion or exclusion of various water deliveries and operational protocols. However, in general, operations that

provided either intentional or inadvertent environmental benefit as of December 2000 should be accounted for the pre-CERP baseline.

Supply/Source Conditions

The general principles laid out in this section make sense. Primary, secondary and tertiary supply sources should be identified for urban, agricultural and environmental uses. The hydrologic conditions that currently trigger switching from one source to another within the regional system should be documented.

Demand Conditions

The white paper states that, as a general principal, urban and agricultural demands will be based upon that amount of water "depended upon" to meet "reasonable needs" in urban and agricultural service areas. (Page 14, lines 9-10) The issue is then raised whether demands for urban uses should be based upon what was actually used as of December 2000, or permitted uses as of December 2000. Quantities of water that are not actually being utilized should not be included among the "existing legal sources" entitled to protection from elimination or transfer. Inclusion of allocated but not actually withdrawn quantities is inconsistent with the purpose of establishing a baseline, which is to ensure that existing users are not significantly harmed by CERP implementation. In contrast to the Modified Water Deliveries Project and C-111 Projects, which address documented currently *existing* environmental needs, these allocated but unused quantities address, in many cases, *future (i.e. post December 11, 2000)* needs. Water made unavailable as a result of implementation of CERP is to be replaced. Clearly, there would be no need to replace water lost as a result of implementing the plan if that water was not actually benefiting an existing legal user

Similarly, demands associated with agricultural consumptive uses should be limited to the actual acreage irrigated on December 2000, and should not include permitted acreage that was not irrigated as of the enactment of WRDA. Supplemental irrigation permits are often granted for capacities that will never be utilized. To include quantities of water in the pre-CERP condition baseline based upon speculation that agricultural acreage may hypothetically be expanded to full permitted capacity is unjustified.

The issue of the most appropriate method of calculating evapotranspiration for estimating supplemental irrigation demand requirements is again raised. As mentioned above, the method that is both most accurate and is consistent with proposed changes to the water use permitting criteria should be used.

Rule Changes Not Related to CERP

The next issue raised relates to addressing water use rule changes outside of CERP. (Page 14, lines 26-29)

Water use permits must be conditioned to assure that uses are consistent with the overall objectives of Chapter 373 and are not harmful to the water resources of the area. Section 373.219, F.S. Everglades restoration has been expressed to be an important objective of the State of Florida. See Sections 373.4592(1)(a)-(h) and 373.1501(2), F. S. The District has statutory authority to adopt changes to its water use regulations to include consideration of the impacts of its permitting decisions, and its responses to water shortages, on the eventual realization of CERP's anticipated benefits.

To the extent the water supply is over permitted, the District loses the ability to ensure that the natural system, rather than holders of consumptive use permits, will receive the appropriate quantity of water consistent with the restoration objectives of the CERP. Rule criteria must be put in place to prevent additional over allocation from occurring, and to ratchet back permit allocations, consistent with state law, in the event that the regional system is already overtaxed.

Fish and Wildlife Demands

It will be challenging to quantify the amount of water needed for fish and wildlife. Water demands for urban and agricultural users are better established and documented than are environmental water demands. While environmental demands have not historically been explicitly defined as a component in the management of the regional water system, for purposes of establishing the pre-CERP baseline, the needs of the natural system must be on equal footing with other uses. Accordingly, modeling efforts to quantify the amount of water benefiting the natural system as of December 2000 must be made a top priority. Water for protection of fish and wildlife should be defined, at a minimum, as all current water deliveries to, and flow characteristics in, the natural system *throughout the year* under pre-CERP baseline conditions, unless such hydrologic conditions are shown to be harmful.

B. Definition of Existing Legal Sources

The "savings clause" in WRDA 2000 states that "until a new source of water supply of comparable quantity and quality as that available on the date of enactment of this Act is available to replace the water to be lost as a result of implementation of the Plan, the Secretary and the non-Federal sponsor shall not eliminate or transfer ***existing legal sources*** of water . . ."

The District's proposed definition of existing legal sources, stripped to its essence, is '[t]he quantity of water available from all locations of which there was a dependence as of December 2000 . . .". This proposed definition, as it relates

to human uses, is ambiguous in that the term "dependence" does not differentiate between actual use and permit allocations that may be much higher than actual use. The purpose of the savings clause is to ensure that implementation of CERP does not cause substantial adverse impacts on existing legal uses of water, S. Rep. No. 106-362, at 56-7, including water used by fish and wildlife. Further, the District's definition proposes to include" non-consumptive uses, including regional surface water deliveries and groundwater seepage for resource protection." While these quantities should be accounted for in modeling and planning efforts, they are not entitled to the legal protection of WRDA 2000.

As noted above, the Savings Clause requires replacement of water, that met or was intended to meet an established demand as of December, 2000, and that is made unavailable a result of implementation of CERP. There is no need to replace water lost as a result of implementing the plan if that water was not actually benefiting or needed by an existing legal user. This is consistent with 373.1501(d), F.S., which requires the District to provide reasonable assurances that "the quantity of water available to existing legal users shall not be diminished by implementation of project components so as to adversely impact existing legal users . . ."

In addition, the proposed definition fails to clearly discuss how "existing legal sources" should apply to the natural system. Congress intended to protect a broader class of uses under the savings clause than traditional consumptive uses that withdraw or divert water. Existing legal sources specifically includes water supply for fish and wildlife. Accordingly, we suggest the following definition of existing legal sources:

"The quantity of water delivered by the C&SF Project that was actually utilized for reasonable-beneficial uses or for protection of fish and wildlife as of December 2000, including water allocated to the Seminole Tribe of Florida as codified under Federal and State law, the Miccosukee Tribe of Indians of Florida, water for Everglades National Park, urban and agricultural existing legal uses for the duration of the consumptive use permit authorizing such use, and those uses exempt from permitting. "

It is important that the definition distinguish between the amount of water drawn from the regional system by legal users, and the entire volume of water. The entire volume that could potentially be used is not entitled to protection under the savings clause.

This section would benefit from a discussion of how any additional allocations that have occurred since December of 2000 will be treated as CERP implementation moves forward. What protections will these allocations receive and how will they be dealt with in determining whether a CERP project is operating as expected?

C. Spatial Identification of Existing Legal Source User Basins

The proposal to divide the C&SF project into source user basins may be reasonable, however it might also create significant barriers to implementing particular CERP projects. If a "source" is defined in terms of a compartmentalized Everglades, then there would be those who would argue that any attempt to "decompartmentalize" those sources would qualify as "source transfer" under the Savings Clause. In addition, the omission of large swaths of the natural system, including Biscayne Bay and the Caloosahatchee and St, Lucie estuaries, from the list of environmental systems is a glaring oversight that must be remedied.

D. A Method for Quantifying Existing Legal Sources through the Pre-CERP Baseline

As mentioned above, water demands for urban and agricultural users are currently better documented than are environmental water demands. As we have discussed, it is an oversimplification to state that the existing environmental system needs are reflective of the operational policies currently in place for the region. (Page 16, lines 11-14) While this statement is partially true, it does not reveal the entire picture. Certain environmental systems were benefiting or had outstanding environmental needs on December 2000 from quantities of water that were unrelated to regulation schedules or to water supply and environmental deliveries. A more comprehensive definition, along with more analysis, of the current "dependence" of the environmental system is needed.

We are supportive of the proposal to create a detailed water budget for each legal source basin. Likewise, the proposal to exclude regulatory discharges from the pre-CERP baseline based upon the reasoning that these discharges have not historically been "depended upon" by any legally protected user seems consistent with WRDA and state mandates, provided that those discharges are not providing incidental environmental benefits or are relied upon by existing restoration projects.

The above proviso is an important one. For example, CERP will not capture all of the water currently discharged, nor should it. In fact, some portion of that water was necessary in December 2000 for varied environmental purposes, such as maintaining proper salinity regimes in estuarine systems. The amount of fresh water that was providing a benefit to the natural system must be quantified and protected via a pre-CERP reservation in order to maintain the December 2000 baseline condition for fish and wildlife in the water bodies that were and still are receiving regulatory discharges.

E. Proposed Procedure for Identifying Impacts to Existing Legal Sources Through PIR Development

The white paper proposes to use the South Florida Water Management Model to estimate a proposed CERP project's potential impact on existing legal sources. The approach laid out, comparison of the PIR volume probability curve to the existing legal source users volume probability curve to determine whether there has been an elimination or transfer of the existing legal source for any user basin, holds promise. It is unclear, however, how it would be determined that a project "has not met its expected performance" (Page 18, lines 14-17), thereby necessitating "further iterations of the design", prior to finalization of the PIR.

Section V Key Concepts in Protecting Water For Natural Systems and Human Uses Made Available by CERP

A. Quantification of Regional Water Availability for Water Supply Service Areas

Regional Water Availability may help address one long-term failing of the SFWMD's water management. Throughout its regulatory history, the SFWMD has issued long-term consumptive use permits without considering the actual amount of water available. This practice has contributed to the diversion of water needed for the natural system to consumptive urban and agricultural uses. Presumably, quantification of regional water availability based upon the pre-CERP baseline condition used for the identification of existing legal sources will maximize consistency between consumptive use permitting and CERP implementation. Hopefully, quantification of regional water availability will facilitate better decisions concerning potential environmental harm resulting from allocations for consumptive uses, and ensure greater consideration of the impacts of future consumptive use permitting decisions upon CERP implementation.

However, because consumptive uses do not cease once a 1 in 10 year drought occurs, assessment of regional water availability must not be restricted to 1 in 10 year drought conditions. Although the reasonably anticipated effects of imposition of water shortage restrictions should be considered, consumptives uses during more severe droughts than 1 in 10 should taken into account.

B. Implementation of Regional Water Availability through Consumptive Use Permitting Rules

The development of an accounting procedure is an excellent concept and is long over due. We are very supportive of quantification of available water in order to

avoid over allocation. However, the statement that the accounting procedure is needed to "assure that volumes of regional water available for consumptive uses are not over allocated or likewise redirected for environmental restoration" (emphasis added) is troubling. Water that is not needed for consumptive uses should be available for environmental restoration. How will the District distinguish between volumes of regional water "available for consumptive uses" as opposed to volumes of regional water available for restoration? This statement would appear to inappropriately prioritize consumptive uses over the needs of CERP and other restoration efforts.

We support requiring permit applicants to quantify the portion of a requested allocation that is "regional water" in a manner consistent with the method used to calculate total regional water available to the service area. Additionally, we would support longer duration permits as an incentive to use alternative sources. Similar incentives to encourage conservation should be developed.

Clearly the total amount of regional water in the regional availability rule should meet both consumptive and non-consumptive uses within a service area. However, such a statement begs the question of what happens if and when the total amount does not meet consumptive and non-consumptive uses, particularly in relation to how water needed for the natural system will be considered. Existing legal uses are protected unless they are determined to be detrimental to the water resources, in which case they can be revoked or modified under Chapter 373, F.S. The District must be prepared to use its clear statutory authority to revoke consumptive use permits when necessary, regardless of how politically unpalatable that may be.

C. Establishing a pre-CERP Reservation of Water for the Environment

The purpose of a pre-CERP reservation of water for the environment is to protect the pre-CERP baseline condition in the natural system from consumptive uses, or operational modifications that would alter target hydrographs. This purpose is not clearly stated in the White Paper, but must be.

The Lower East Coast Water Supply Plan recommended a change to a rainfall driven schedule for the Water Conservation Areas and Everglades National Park. A rainfall driven delivery schedule is intended to improve timing and location of water depths in the Water Conservation Areas and Everglades National Park and to restore more natural hydropatterns. While the rainfall driven deliveries should be accounted for in the pre-CERP baseline for planning purposes, existing legal source protection must not, as indicated in the white paper, constrain implementation of the rainfall driven schedules. This constraint is not dictated by the WRDA 2000 Savings Clause because the adoption of rainfall driven reservations is not a CERP project. Existing legal sources are entitled to

protection from water unavailability that results from CERP implementation. Any constraint that would allow the natural system to further degrade pending availability of CERP benefits must be carefully scrutinized, not just under WRDA 2000 but other applicable legal provisions as well.

Also, the white paper states that subsequent to federal approval, "the portion of the rainfall driven deliveries which are projected to protect fish and wildlife will be reserved from use through state rule." The rain-driven operational concept is intended to deliver water to and from the Water Conservation Areas in order to mimic a desired target stage hydrograph at key locations within the Everglades system. A more natural hydrological regime will benefit the ecosystem as well as its fish and wildlife inhabitants. The entirety of rainfall driven deliveries must be reserved.

Finally, what about other parts of the ecosystem? Why is the only reservation of water for the Everglades Protection Area? Other portions of the natural system, such as Biscayne Bay, must also be subject to a pre-CERP reservation of water.

D. Quantification of Additional Water for Natural System and Human Uses Made Available by CERP

The biggest weakness of this section, and a key flaw of the paper as a whole, is its exclusive focus on the capacities of currently planned facilities rather than analysis of how much water is really needed for restoration. CERP is supposed to be primarily about Everglades restoration. The water to be made available by CERP should be whatever it takes to restore the remaining Everglades to "natural conditions." If analysis or experience shows that more water is needed for restoration, the District must be willing to change course. Accordingly, adaptive assessment and adaptive management was written into WRDA 2000. Locking the quantification of water availability into the capacity of the currently planned facilities seems contrary to adaptive assessment.

A first step to quantifying "additional water" made available by CERP is a regional modeling effort that is focused on the remaining Everglades. The goal of the effort would be to estimate an envelope of plausible natural system water needs, without considering all the constraints such as flood control, protection of existing legal sources, and possible phasing in of flows, etc. The goal would be to obtain the best scientific estimate of what might be needed for restoration when we are all done.

The scenario needed would likely be based upon removal of barriers to flow within the current Water Conservation Areas 3A and 3B. In this scenario, the concept of a separate basin between ENP and WCA 3A, 3B would no longer exist. The scenario would assume a range of effectiveness of seepage control along the eastern boundary, so as to take into account the possibility that the seepage control might leak, intentionally, for water supply purposes, or not leak.

The modeling scenario would not rely upon Lake Belt water into NE Shark Slough – that water should predominantly come as sheet flow from current 3B area. The only man-made control on the WCA 3A, 3B, ENP footprint would be by timing and amount of water to be added at the northern boundary of 3A. The timing and amounts of water needed would be estimated using depth performance criteria at a number of locations within 3A, 3B, and ENP.

The idea is a wide open, unconstrained area flowing as sheetflow, and driven by a combination of in situ rainfall and humanly controlled water deliveries to the upstream end. By monitoring the water depths within the area, one would determine when and how much water to deliver to the system.

The scenario would have to model an envelope of target water depths, as there is still biological uncertainty regarding the appropriate target. Modeling should take this into account – and then assume that CERP will make available enough water for the deepest plausible depth targets. Additional uncertainty would come from assumptions on hydraulic roughness – i.e., how much resistance to downstream sheet flow will actually be present in the restored system.

All of these uncertainties can easily be built into a modeling exercise, and can reasonably be expected to yield an envelope of estimates of the water quantities needed at the upstream end of WCA 3A for ecological restoration.

These estimates then become the measure of the water made available by CERP for the natural system. The estimates can be compared to estimates of availability from currently planned structures. If the facilities fall short, then adaptive management is called into play to identify how to meet the shortfall. If the facilities produce "new water" in excess of the water needed for restoration, that excess water is "available" for water supply or other appropriate human uses.

E. Protection of Additional Water for Natural Systems and Human Uses Made Available by CERP

Again, CERP is first and foremost about restoring the Everglades. A reservation of water made available to the natural system must be finalized prior to execution of the PCA. The purpose of such a reservation is to ensure that water intended for the natural system gets to the natural system, not to guarantee that "consumptive uses are adequately protected." (Page 23, Line 18)

Interestingly, scenarios for dealing with potential shortfalls in meeting future human demands are discussed, while the possibility of shortfalls in the amount of water needed to achieve restoration goals is not addressed.

APPENDIX A. Definitions

As discussed above, the commenting organizations suggest amending the proposed definition of "existing legal source" so it reads as follows:

"The quantity of water delivered by the C&SF Project that was actually utilized for reasonable-beneficial uses or for protection of fish and wildlife as of December 2000, including water allocated to the Seminole Tribe of Florida as codified under Federal and State law, the Miccosukee Tribe of Indians of Florida, water for Everglades National Park, urban and agricultural existing legal uses for the duration of the consumptive use permit authorizing such use, and those uses exempt from permitting. "

Also, we are concerned that the definition of "natural system" is limited to those areas in public ownership. Such a definition is unduly restrictive and could be highly problematic.

CONCLUSION

Thank you for your consideration of these comments. I am available to further discuss these ideas at your convenience.

Sincerely,

Marcy I. LaHart